

THE UNIVERSITY OF HULL

Coping with stress through bibliotherapy:

The effects of reading Zhuang Zi's fables for Taiwan college students

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by

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ABSTRACT

The term “Bibliotherapy” was first coined in 1916. It was mainly used in hospitals for veterans and psychiatric patients before the 1970s (Alexander & Buggie, 1976). Later on, bibliotherapy was applied in the developmental and psychotherapeutic field. Russell (1958) defined bibliotherapy as the application of relevant literature to deal with the client’s personal problem and developmental needs at the proper time.

In this thesis, an appropriate source of reading to effect stress reduction has been found in Zhuang Zi’s fables. This philosophy may have current relevance for our hectic and materialistic modern life. This thesis presents an experiment in bibliotherapy carried out with Taiwanese college students reading a popularized version of the fables.

For the purpose of studying the effects of bibliotherapy with Zhuang Zi’s fables on various aspects of stress that could be anticipated in the lives of students, an inventory called the “Philosophical Beliefs toward Stress Coping Inventory” was designed, and after pilot testing it was composed of 45 items with a Likert scale. These expressed a low-key philosophy of acceptance of circumstances, i.e., “go with the flow”, seeking inner peace rather than worldly achievements. The dimensions were confirmed in retrospect through factor analysis to be “Discarding Prejudice”, “Removing Greed”, and “Forgoing Demands”. The main findings of this study are as follows:

1. There are significant effects on reduction of the following stress: Financial Problems, Career Planning, School Work, and Interpersonal Relationships.

2. Reducing the stress of Financial Problems is mainly influenced by the concept of Removing Greed.
3. Career Planning stress reduction is significantly influenced by the concepts of Quitting Stubbornness, Managing Emotions, Freeing the Spirit, and Accepting Life's Fate.
4. Accepting the concepts of Quitting Stubbornness and Being Optimistic in Adversity facilitates stress reduction.
5. People with a "Type A Behaviour Pattern" can be helped in stress reduction.
6. Females are more influenced than males in stress reduction by bibliotherapy intervention; however, males are more influenced than females in stress reduction by self-help bibliotherapy.

The results show the beneficial effects of the intervention, which can be recommended by educational or health professionals as an alternative approach in coping with stress.

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CHAPTER ONE

INTRODUCTION

Nowadays, people are experiencing greater levels and more varieties of stress than in past decades due to the proliferation of information, endless enticements from commercials, and competition for limited opportunities and employment. Undeniably, the issue of coping with stress should be a matter for concern.

1.1. The stress impacts of modern life

In today's information and technological development of the "network society", there seem to be new forms of social time and space: "space of flows" and "timeless time" as termed by Castells. He proposed that "space of flows" has overthrown the traditional space concept, "space of locale", in which the form, function, and meanings of place are self-contained in the boundary of physical contiguity, i.e., place-bound localities of cities and countryside. Also, space and time exist simultaneously, which cannot be split completely, because the concept of space is just like "crystallized time", and a space of flows produces the concept of "timeless time". For example, we can surf the internet by any superlink to another, which breaks the linear flow of thinking. "Timeless time" means the change of time organization, which now has no succession — the sequence of things is interrupted constantly, which simultaneity and instantaneity attendant on the co-presence of various pieces of information from the Internet. Actually, "time" has been compressed and broken from the traditional notion of

time in which one thing comes after another. In the global world, people live as if in cyberspace, highly mobile. It can often occur that one moves from Europe to Asia within a day. The space of flows and timeless time combine to create a culture of “real virtuality”, in which we experience reality immersed in a virtual image setting (Castells, 1996). Such a prevalence of networks can bring innumerable resources and prosperity; it can connect, but it can also disconnect, or be destroyed by an internet virus, or even ensnared in a “perverse connection” in which information technology is applied for the purposes of criminal economy (Castells, 2000). The impact of these dichotomies may work to produce new insecure, uncontrollable, disembodied, random, and stressful environments in many domains of modern life.

Although the worldwide prevalence of information and mass manufacturing let us enjoy better quality and cheaper products, and have more choices, more convenience, and a more comfortable life, they also bring uncertainty and rapid change. They bring elevated expectations that are not easily satisfied. Living in a competitive and computerized society, delivery is expected to be efficient even if something is not necessarily needed in a rush. For example, we can order books, cuisine, or other goods through the Internet, and often can receive them within 48 hours. However, such high speed requirements bring forth tension as well. These may potentially set a time bomb that endangers one’s health. With more chronic diseases and psychosomatic disorders, peoples’ health problems are shifting into more psychological and behavioural

misadjustment. For example, Dever (1976) indicated that living environment and individual lifestyle need to be examined because they probably play a potential role in threatening health in most developing and developed countries. Therefore, the issue of a stressful environment and the necessity of coping mechanisms has become more significant in the 21st century.

1.1.1. Rapid modernization and social change in Taiwan: Economy and values

A hundred years ago, agriculture was the fundamental productive activity in Taiwan. After the 1960s, light industrial manufacturing, processing and export rapidly developed, so that most blue collar families enjoyed double incomes with lifelong stable employment which established the relatively even base of Taiwan's economy. These developmental phases resembled Bell's (1974) description of social development (see Appendix 1-1: Differences between pre-industrial, industrial, post-industrial society). Furthermore, Ku (2006) explained that small/medium enterprises undertook export-oriented manufacturing industry to create the "Taiwan experience", or "Taiwan economic miracle". This established the economic foundation for Taiwan's transition from agriculture to industrialization in the 1960s-1970s.

After the 1980s, the Taiwan dollar experienced rapid revaluation, and by 1992 the currency value had risen to an exchange rate of 25 New Taiwan Dollars for one U.S. Dollar (compared to NT\$ 40 exchanged for US\$ 1 in 1983, <http://www.cbc.gov.tw>; accessed 2010). With rapid appreciation of Taiwan's currency, Taiwan developed

towards a consumer society, and then a large service sector rather than a large manufacturing sector. Also, Taiwan has become a centre of the global electronics and computer industries. This has brought forth conspicuous consumption in a prosperous domestic economy. However, along with globalization, transnational enterprise and chain retail stores have constantly proliferated everywhere, while more traditional stores declined. Afterward, a great number of foreigner labourers with low wages have replaced local labour. Thus, there is a general impression that the number of unemployed youth has increased, and Taiwan is gradually developing greater rich-poor social polarization, although there is little sign of absolute poverty.

Along with modernization, the pace of life in Taiwan seems to have become more tense. People are required to work as accurately and quickly as computers, with little consideration for individual differences and humanity. Competition in the global economy has brought an abundant economy, but even professionals work long hours, and psychological depression has escalated as well.

In traditional Western society, people were bound to their land and property, and power structures centred on a few elites; concepts of restraint and delayed gratification were rooted in bourgeois culture. However, the above phenomena have quickly been eroded, because science and technology cause vast changes (Bell, 1974). Thus, while we enjoy the benefits of modern life, we also need to see the potential problems in order to develop coping strategies.

Regarding family structure changes in Taiwan, traditionally three generations (i.e., grandparents-parents-children) lived together, which is what I experienced, and we had a strong family belongingness and identity, and reliable child care assistance. Sons inherited the family estate, but with this the supervision and control of older generations were unavoidable. As an industrialized and urbanized society has formed, many people have moved to the city to work. However, people living in metropolitan areas seem not to be close to others, as compared with those in the countryside. Although the new generation can escape from the older generation's supervision, they are busier with their own affairs, more individualized, and take less care of their elders. Thus, the interdependence among generations in families in traditional Taiwan society has gradually declined, which could make people feel some level of sense of loss and emptiness.

Nowadays, suicidal tendencies have generally increased among young people, and worldwide, the number of suicides among those aged 5-44 increased from 40% of the total in 1950, to 55% in 2000 (WHO, 2004). Due to rapid economic prosperity, industrialization, liberalization of the social system and political restraints in the past decades, Taiwan's suicide trend increased in the late 1990s (Lu, 2004). Further, Page et al. (2006) found connections between youth suicide attempts, and hopelessness and loneliness in adolescence. Also, Gau et al. (2008) stated that for Taiwan there is a positive correlation between increased suicidal tendency and parenting styles of low

affect, overprotection, and authoritarian controlling. The above research has shown that psychological reactions of youth are related to the phenomena of social and family changes.

Furthermore, people pay more attention to material enjoyment than spiritual growth due to the rapid shift in social values promoted by commercial ads. For example, many single women in Taiwan are dressed with famous brand handbags and expensive commercial beauty products advertised in magazines (Adrian, 2003). Most young people have the same pursuits, but they tend to agonize over their personal problems.

I have seen these psychological experiences in my work as a school counsellor. For example, one of my students complained of feelings of emptiness, although she had good peer relationships and often enjoyed shopping together with friends in famous stores. Her parents had divorced over ten years previously and both had re-married. She lived with her rich father on a different floor, with plentiful living allowances. In fact, she felt abandoned, unwelcome, and without love, living alone in a big house.

Another case I observed was a male student who had a part-time job in a convenience shop after class. He hardly earned enough money to date his girlfriend. In his view, “no money, no talk”; money can influence anything. He would feel ashamed if he did not have enough money to pay for entertainment or gifts during dates. He believed that it was more practical to try to gain a high paying job after graduation than a job he liked. Such materialism without humanism and spiritual concerns could presage

a crisis in life values for the younger generation, which are the main themes discussed in this study.

1.1.2. The context of the Y generation in Taiwan

This study has focused on examining stress phenomena and exploring coping mechanisms for college students in Taiwan of the Y generation (born after 1980), as it is termed in North America and Western Europe. They have also been called the “e-generation”, or “after-eighty generation” (Schott, 2008). In Taiwan, we commonly call this cohort the “strawberry generation”, “pudding generation”, or “tofu generation”. They are just like strawberries nourished in a greenhouse, with high price, sweet and delicate, but fragile, and easily bruised or crushed. This generation was raised in richer surroundings than their elders, and they are used to abundant material resources. Most can easily get almost anything they want, and they have been over-protected by their parents (those who hover around their children are also called “helicopter parents”). However, this generation ironically labels their parents the “guava generation”: this fruit has hard flesh with tough seeds in the middle and it is hard to bite into. It could be used to symbolise stubbornness and toughness, with endurance of hardship. In fact, the living conditions of this generation had just been lifted from poverty, but they grew and were educated under authoritarianism, so that they tended to be more obedient and hierarchy conscious. In contrast, there has been less hierarchy and more expectation of equality among the youths in the strawberry generation, but incomes are skewed.

Originally, the “strawberry generation” label was created by the mass media. The general impression of this generation seems to be that they are arrogant, over egocentric, more focused on self interest instead of group interest, lacking in profound self-reflection, less tolerant of frustration, and less resistant to stress. Most of them tend to be spoiled, frail, sluggish, unwilling to endure hardship, irresponsible, talk back in defiance, and insubordinate (Schott, 2008; Chen, 2010). However, they also have some advantages; they are particularly good at creative thinking, and accessing electronic media.

These phenomena reflect the life experience of the strawberry generation: although shielded from current material need by hardworking and often absent parents, they are nevertheless under tremendous parental and social pressure to excel in school studies, and thus compete for high-paying jobs in the future. If they do not succeed, they will fall to the bottom of society in low-paid service jobs.

The entrance into employment is more competitive, because many qualified people apply for each job. This generation of youngsters in Taiwan has very easy access to higher education, due to the high number of universities established in recent decades. However, this situation leads to a more competitive and stressful search for employment after their graduation. They need to withstand pressure to persevere in their career search. Along with economic crisis and downturn starting from 2008, youth unemployment rates in Taiwan, like in Japan, are lower than in France; around one-third

of workers aged 15 to 24 in Taiwan are in temporary work with insecure contracts (UNESCO, 2010). Unavoidably, this group would repeatedly confront new stress in a society full of competition and uncertain future.

The low birth rate is another social fact that makes an impact on the strawberry generation. From the statistical data of the Organisation for Economic Cooperation and Development (OECD, 2009), fertility rates in Chinese Taipei (i.e., Taiwan) have been declining, from 1.68 in 2000 to 1.12 in 2006. This is close to half the average for 22 Asian economies (2.17 for 2006), but closer to the average for 30 OECD countries (1.65 for 2006). The Ministry of the Interior, Taiwan (2008) pointed out that Taiwan has the lowest fertility in the world. The Total Fertility Rate (TFR) for Taiwan in 2008 was 1.05; that for the Philippines was 3.08; for India 2.74; for Japan 1.37; for the U.K. 1.96; for France 2.01; and for Germany 1.38. Nowadays, these problems are more severe than before. One generation ago, most young women in Taiwan were factory workers, generally bearing three or four children; two generations ago, they were farm housewives with five or more children, who had a strong support system of traditional rural society with relatives who lived together or lived nearby. However, most people of the strawberry generation have no siblings, and no playmates at home. They need to solve their life issues alone, with fewer opportunities of learning or sharing closely in their growing period.

Further, an ageing society is coming, in which the young adults may feel more

stressed because each of them will take care of about four elderly parents in the future, especially in traditional Asian countries with a high emphasis on filial piety and duty. Research on five aging Asian economies (Chinese Taipei, Hong Kong-China, Singapore, Korea and Japan), indicates that expected old-age dependency rates will be between 63% and 80% for Chinese Taipei in 2050, much more than the average level of 51% for 30 OECD countries, and close to double that of the average level for 14 Asian economies, 42%. Life expectancy was found to be 78 years and more for high income economies such as Chinese Taipei, Korea, New Zealand, Singapore, Australia, Japan, and the average for 30 OECD countries. However, health care, such as elders, day care, rest-homes, and single mother subsidies seem to be inadequate in Taiwan. For example, total expenditure on health for 2006 represented 6.1% of Chinese Taipei's GDP, which is between the averages for 30 OECD countries 8.9%, and for 16 Asian economies 4.6% (OECD, 2009). Therefore, Taiwanese youngsters' mental health needs to be considered not only by government, but also by potential researchers or private organizations.

A feature of Taiwanese youth culture is that many youngsters pursue the creation of charming self-images. They regard following fads as "cool", regardless of what they are suited for and need. The mass media creates the standard of beauty, such as a slim figure like that of a supermodel. Thus, some young female students tolerate hunger in disregard of a normal diet, to fight against an average-build or chubby body. Also, full breasts are symbols of sex appeal. With this focus on physical appearance, breast

enlargement surgery, face-shaping and/or liposuction surgery have become profitable. Another social phenomenon is “credit slaves”, buying things on credit: they enjoy the pleasure of the moment for immediate gratification, but later they get burdened and feel stressed.

Since the above need money, many college students favour part-time jobs as convenience shop clerks after class, so that they have multiple social roles, not only simply the student role. They seemingly have matured physically, and jumped into adult society earlier than the previous generation. In fact, their thoughts and behaviour have not fully developed yet, as they may lack the capacity to patiently cultivate humanity; less touched by real life, they may feel emptiness or boredom that leads them to chase some excitement for fun. For example, the strange “Flash Mob” phenomenon occasionally reported by TV news has occurred in Taiwan, Japan, and Korea, in which young internet pals arrange a meeting via MSN/ Facebook to take part in some nonsense activity just for fun or freakiness, such as imitating dog barks, or worshipping in front of a certain spot in shopping malls, then, dispersing in a hullabaloo to make the onlookers gape in bewilderment or confusion. Sometimes, this excitement is not easily understood by the older generation.

Lee, Hwang, and Yen (2008) investigated the main health problems of Taiwanese college freshmen with 19,349 subjects from 11 colleges as noted in the Appendix 1- 2. There were four dimensions in this investigation as follows: (1) Health habits/behaviour:

As the results show, 65.3% of college freshmen sleep for less than 7-8 hours; 2.4% of freshmen are often sleepless. Why do so many college freshmen sleep inadequately? What did they do during late nights? The investigation also showed that only 67.6% of college students had a good habit of having breakfast. The remaining students had no breakfast, and low blood sugar that may cause impaired attention, less energy, low responses, and low learning effects. Moreover, only 25.6% of females had a habit of exercise, while 54.8% of males had such a habit. (2) Mental health: The rate of “none or seldom” in occurrence of anxiety/depression for females was 53.7%; that of males was 59.6%. About 3% of freshmen “often” suffered anxiety/depression. (3) Evaluation of self-health: Females felt worse than males in evaluating their health condition, health habit/behaviour and psychological responses. These data seem to indicate that females did not work well on self-management or did not realise the importance of health. Males felt more satisfied with their health condition. However, this might be because males had low expectations, less concern, or were less sensitive about health issues. (4) Physical growth: According to the Taiwan Department of Health, they defined the ideal Body Mass Index (BMI) as greater than or equal to 18.5, and below 24 ($18.5 \leq \text{BMI} < 24$). The data showed that 25% of females were under-weight (i.e., $\text{BMI} < 18.5$), and 12.8% were over-weight ($\text{BMI} \geq 24$); however, 13% of males were under-weight and 28.8% were over-weight. In Taiwan, slim females are regarded as beautiful, and popularly attract males. Many young women tolerate starving to control their weight, to

the extent of anorexia. Thus, various weight control beauty salons and diet products are quite popular in Taiwan. These extreme values of beauty create negative impacts, extending to campus culture.

Based on the statistical data of WHO (2001, p. 1): “one in every four people, or 25% of individuals, develop one or more mental or behavioral disorders at some stage in life, both in developed and developing countries. These disorders can now be diagnosed as reliably and accurately as most of the common physical disorders. Some disorders can be prevented; all can be successfully managed and treated.” If the burden of mental disorder can be prevented at a very early stage, and this can be achieved through mental hygiene education, it can decrease the severity of suffering and reduce the national costs of health treatment. Whatever we strive for, the destination is to reach the life state of “well-being”, which is defined by WHO (2010) as mental health, realizing our potential, having the capability of coping with the normal stresses in life, working productively, and making a contribution to society. Thus, the vision of creating a healthy growth environment is a goal worth striving for.

1.2. The importance of this study

Nowadays, many college students’ values and standard for success are built on possession of material wealth, and most of them are concerned with individual interests and pleasure, i.e., they only care for themselves without caring about others. This would result in a lack of social belongingness and would potentially be the root of various

kinds of stress. Likewise, Bellah et al. (1985) pointed out the side effects of anomic individualism in middle class American culture; the individual has more concern for “feeling good” than “being good”. Under these objective conditions of social alienation, a high level of materialism and selfishness results in feelings of isolation and emptiness. In this context, non-materialistic philosophies such as those of Zhuang Zi take on heightened significance.

Another aspect of Zhuang Zi that is relevant in the contemporary period is his eschewing of excessive material consumption and advice to achieve contentment with the minimum. In the Tokyo Protocol of 1991, it was recognized that world resources are being depleted, the earth’s ecology has been severely damaged, and irreversible consequences are imminent. Thus, many resolutions for carbon emission reductions were proposed, and the most urgent task is to turn back global warming. If the climate increases in temperature by 1 °C, it would decrease production of grain by 10% (ETC Group, 2009). For example, cherry trees are blossoming much earlier than the customary time, and wheat also matures earlier, but the tassels are empty due to warming. It is obvious and irrefutable that humans must decrease their aggregate consumption of world resources within the next generation, or suffer the consequences.

Humans have made too much pollution, and abused too many resources for excessive economic exploitation. The new understanding of this has spurred social reactions and movements. From the Internet, the Movement for Compassionate Living

has protested against use of animal products, but promoted sustainable living, and it advocates a vegan diet (<http://www.iwvv.org.uk>). New crises exposed by the international Green Party caution us to be against nuclear power and genetic modification, both of which may be seen to greatly transgress nature (Kasper, 2008). It is argued that cows are born to be vegetarian, but humans transform them to non-vegetarian by feeding them bone powder; also, people are deforesting the tropical rain forest of the Amazon, which has led to discharge of some virus which has been unknown for many centuries, and made people contract an irresistible immune disease. Researchers have invented a process whereby human liver DNA is injected into rice cells for detoxification purposes, to prevent insect pests, creating a huge commercial interest; but this device makes humans eat humans themselves, conflicting with ethics. People may well pay the cost for misusing their intelligence. In parallel, Zhuang Zi strongly advocated that people should not transgress the rules of Nature. Instead, it is best that all beings peacefully coexist, and each respects others' rights of existence, with selfless giving. Similar to Zhuang Zi, Russell (1996) pointed out that sources of unhappiness are competition, fatigue, and jealousy, which are derived from greed for fame and fortune. In contrast, the sources of happiness are affection, family, and occupation, which are devoted to and shared with others.

In summary, there are two basic reasons for removing excessive desires: (1) Subjective personal happiness is better achieved through philosophies of contentment

with the limited, rather than through philosophies of striving for social status or wealth. For instance, people living on the small islands in the Pacific Ocean score high on the happiness index, because they are content and free from worry, even though they are poor. (2) The objective conditions of world resources will force lower consumption in the future. In this context a non-materialistic philosophy such as Zhuang Zi's philosophy is appropriate and worthy of propagation in contemporary society. Then, this leads to the utility of applying the philosophy of Zhuang Zi to education of college students in this case.

1.3. The inspiration for this study

The design and execution of this study have grown out of my experience as a teacher in a college in Taiwan. I have been responsible for teaching modules of psychology and Chinese literature in my college for fifteen years. Traditionally, the standard Chinese module is composed of three quarters classical Chinese utilizing ancient writings, and only a quarter is contemporary literature. Most such instruction emphasizes the annotation and interpretation of context, and analyses the aesthetic style of literature in order to improve students' comprehension, reading, and writing skills, as well as sublimating life perspectives. During my teaching career, I gradually realized that the more recent students tend to be less patient and interested than former students in this serious and tedious required course, so then I tried to create more interaction with students in class, and analyse the authors' historical background to explain how they

created their timeless readings, and how they broke through bottlenecks in life; I also drew parallels to modern examples. Then students showed more enjoyment and presented positive feedback in my class, especially on the themes of Zhuang Zi's concepts. I brought forth more dispute and discussion because his thoughts and lifestyle diverge from this materialistic society. Also I asked students to creatively interpret Zhuang Zi's fables by presentation with powerpoint, and we held a formal debate on related topics, about whether Zhuang Zi's concepts are active or passive in modern life. Sometimes surprising and practical responses emerged, no matter whose side won the debate.

Afterwards, I offered an average of two optional modules of Zhuang Zi's fables per semester in my classes. This not only led students to appreciate the aesthetic expression of ancient writings, but also emphasized their application in modern life. In addition to reading the original text, an interesting cartoon book and cartoon film were adopted as auxiliary implements to vividly impress students.

Moreover, I am also a school counsellor in our college seeing an average of 20 cases per month. Most clients, i.e., students referred for counselling or voluntary clients, come to counsel during noon time and the break during their class sessions. In my counselling role, I usually gave clients some homework to read topics related to Zhuang Zi's fables, and discuss these along with their personal problems and worries in the next counselling session. Usually, I see the effectiveness of this homework from the clients'

positive feedback and body language, e.g., they smile more and have a more relaxed sitting posture. The other reason for adopting Zhuang Zi's fables as an auxiliary tool during counselling is to reduce clients' defensiveness, and avoid embarrassment while directly challenging young peoples' materialistic and individualist values. Besides, the novel "*Way of the Peaceful Warrior: A Book that Changed Lives*" by Dan Millman (2000) is popular in Taiwan. It also has a film version named "Peaceful Warrior", which expresses a life philosophy similar to Daoist philosophy. Here are some memorable quotes from this film which can be found on the Internet: " I call myself a Peaceful Warrior, because the battles we fight are on the inside. A warrior is not about perfection or victory or invulnerability, he's about absolute vulnerability. The journey is what brings us happiness, not the destination. There is no starting or stopping — only doing." The ideas of this film have really inspired me to look inside my heart. They resemble Daoist life philosophy and remind me to apply Zhuang Zi's concepts to help students in working through their life issues.

In addition, I held a workshop for students entitled "Making life meaningful: A dialogue between Chinese and Western philosophy" in 2003. It included three themes: (1) How long did Plato and Zhuang Zi live? (i.e., how long have their philosophies influenced mankind?) (2) The introspection of Zhuang Zi's fables. (3) The practice of Socratic dialogues. Surprisingly, the students enjoyed this way of introducing and discussing Zhuang Zi; this activity seemed to be more effective for the students than

class lectures. From my personal experience, I became curious as to whether Zhuang Zi's fables could benefit more people, and whether the influence of his philosophy is really effective in developing coping strategies. Thus I came to the intention of achieving a deeper application, and further wanted to scientifically verify the feasibility of using Zhuang Zi's concepts for bibliotherapy. This is the aim with which I undertook this research.

1.4. The purposes of the study

The goal of the study is to test whether bibliotherapy with Zhuang Zi's fables can decrease psychological stress for college students in Taiwan. If so, this test and the means for stress reduction might also be applied to other populations with a Chinese cultural heritage, or perhaps with adjustments even to non-Chinese people.

Based on my accumulated teaching experience and interaction with students, I selectively chose several interesting and relevant contents from Zhuang Zi's fables as suitable reading materials. These fables have appropriate philosophical content, accessibility to the cultural understanding of the participants, and availability of engaging media in cartoon books and films. The purposes of this bibliotherapy were as follows:

- Help students be more aware of their life meaning and values through reading Zhuang Zi's fables.
- Reflect on current social expectations and individual's real needs.

- Improve students' ability to deal with various current problems and sources of stress.
- Explore the significance of the relationship between Zhuang Zi's concepts and stress reduction.
- Explore the contribution of bibliotherapy to education and counselling.

1.5. Ways of coping with stress

In the 21st century, the issue of stress and its treatment has greatly concerned all health professionals. Various approaches to coping with stress have been proven effective. However, prevention is better than cure; understanding the nature and causes of stress, and ways of coping with it, could help prevent people from experiencing stress, or reduce stress. Thus, I first wish to review how stress can be conceptualized and identified, and how it might relate to particular life contexts such as the stress experienced by college students.

1.5.1. Definitions and types of stress

One of the influential early definitions of stress is to be found in Lazarus (1966); he defined stress as arising when the demands of the situation exceed individual ability and resources. Selye (1974) indicated that stress is usually the result when people fail to deal with present situations or danger. In other words, stress responses are occasioned by the imbalance between self efficacy and requested loadings, which can even be a threat to one's life or a danger to health. In addition, stress would be strongly induced

by conflict. Lewin (1935) first identified three patterns of conflict: (1) approach-approach conflict: choosing between two nearly equal and desirable alternatives would make one vacillate. (2) approach-avoidance conflict: one is involved in an ambivalent dilemma, both attracted and repulsed. (3) avoidance-avoidance conflict: one must pick from two equally disliked choices. Besides these, there could even be double approach-avoidance situations if the situation has more than two contradictory choices. Undoubtedly, conflict would bring forth inevitable stress. Decreasing conflict is a necessary condition in coping with stress.

Aaron T. Beck said that stress is just like seasoning, which needs to be added in every meal. Life would be insipid if we have too little; it would become burdensome if we have too much. The eminent stress coping specialist Selye (1974) said that stress will be terminated only when people die. However, not all stress is harmful, and moderate positive stress can motivate our progress, and heighten concentration on the task; but long-term negative stress would greatly affect our moods, frustrate our life aspirations, challenge ego strength, or threaten our health. He classified stress into four kinds on two dimensions as below:

1. Distress (negative stress): e.g., being unemployed, divorced, etc.
2. Eustress (positive stress): e.g., getting married, winning a prize, etc.
3. Overstress: it may cause nervousness or burnout.
4. Understress: it may cause one to become spoiled, idle, or lacking in motivation.

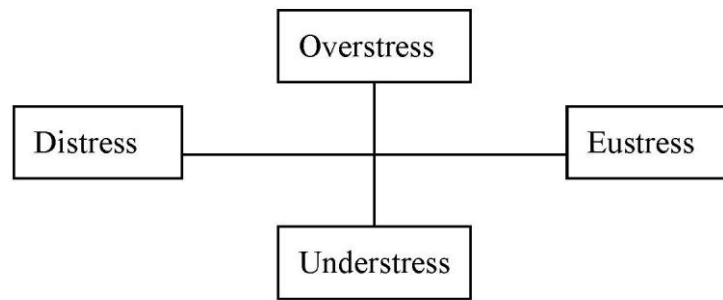


Figure 1-1: Types of stress

1.5.2. Physical responses to stress

Much medical research has provided evidence that some chronic or serious diseases can originate from psychosomatic disorders. Stress plays a critical role that deeply influences our health everywhere and at any time, challenges our coping ability, and causes certain emotional impairment. The physical symptoms of stress include muscle tension, chronic stiff neck, headache, migraines, digestive disorders, stomach ulcers, high blood pressure, heart attack, stomachache, weaker functioning immune systems, allergies, neuroses, and other psychosomatic diseases.

Walter Cannon in 1929 first proposed that evolution provided humans with the “fight-or-flight response”: The fight (anger) and flight (fear) responses are known as biological “stress responses” for the purpose of alarming the body to prepare to defend oneself or run away, and can also be triggered by non-physical threats, such as waiting in traffic or coping with a broken relationship. Beck (1976) modified Cannon’s types into the “fight-or-flight-or-freeze response”, which refers to the ways that animals react

to arouse the sympathetic nervous system for physical survival strategies. This response is similar to the first stage of a General Adaptation Syndrome that regulates stress responses. Selye (1974) pointed out three stages of the General Adaptation Syndrome (G. A. S.) consisting of (1) an alarm reaction: While confronting acute stress or a threatening situation, the body will urgently switch on the protective systems to start stress hormone secretion (adrenal gland cortex), to alert and provide energy, such as high blood sugar and high blood pressure. (2) A stage of resistance: people would defend themselves with full effort, which stimulates the ability to become stronger than usual. (3) A stage of exhaustion: If stress is neglected or lasts for a long period of time, it could threaten one's health and cause physical problems. Many people go through these three stages. However, we can suffer in the least degree if we are aware of the stress and successfully cope with it in the first stage.

Nowadays, some medical scientists are trying to invent a new medicine to disconnect the biological stress responses. However, this is merely a means to alleviate the symptoms of an illness, but not to perform a radical cure; it is not effective to solve problems. Thus, the ideal is to prevent stress, but not block the responses caused by stress.

1.5.3. Psychological responses under stress

One's mental disturbances mostly stem from one's personality and value system. Friedman and Rosenman (1974) found that personality, especially Type A personality,

plays an important role in inducing coronary heart disease, anxiety, irritability, etc. The traits of Type A behaviour are as follows:

- An excessive competitive drive: the individual possesses strong motivation for achievement and high standard of self-requests, embraces strong competition, and aggression that show off his/her unique contributions purposely.
- A chronic sense of time urgency: habitual time pressure, always having endless things to do and feeling anxious, frustrated and irritable.
- An easily aroused hostility: hostility and defensiveness towards opponents.
- Deep-seated insecurity: judging one's accomplishment in terms of numbers
- Inability to enjoy genuine leisure.

In contrast, people with Type B personality work for personal satisfaction, not to defeat the competition or attain others' expectation, value leisure, and relax without feeling guilt. In summary, the basic psychological responses of stress are social withdrawal, loss of interest in sex, temper outbursts, extreme impatience, fatigue, indifference, listlessness, anxiety, fear, anger, lack of attention, an inability to concentrate, depression, forgetfulness, weeping, fright, dread, feelings of uncertainty, and hopelessness.

1.5.4. The process of coping with stress

Stress or potential stress exists everywhere in our experience, entangled with our daily life. According to my experience as a school counsellor, most of my clients'

problems were related to schoolwork loadings, peer interactions, romantic conflicts, financial shortages, uncertainty of future career, etc. Besides the common stressors identified above, there may be various unnamed potential stressors that in our lives come and go. Only by ascertaining the cause and the nature of stress, can we really help students in solving problems and coping with stress. As a counsellor, I must think in terms of how I can help my clients and students to deal with stress, and what approaches might be effective. A basic diagnosis involves analysis of the source of stress.

The stressors may be classified into “internal” and “external” types for simple identification (see Figure 1-2): (1) Internal stressors: some stressors are formed internally by oneself, such as from one’s personality characteristics, e.g., tensions induced by a type A personality with traits of aggression, compulsion, perfectionism, ambition, work-a-holic, and less trusting of others. (2) External stressors: objective forces which threaten or affect us in either visible or invisible ways, for example, heavy work loads, emergency tasks, others’ expectations, life-altering news either personal or impersonal, traffic jams, environmental pollution, hazards, natural disasters, riots, wars, etc.

Obviously, it is impossible to completely control or avoid externally created stress. However, the reaction to external stress can be managed well or dealt with poorly, thus additional stress, depending upon the style of one’s thinking and approach. One can ideally deal with internally created stress, e.g., by taking positive steps to reorganise life

activities and attitudes. The process of stress coping is briefly conceptualized in the following flow chart:

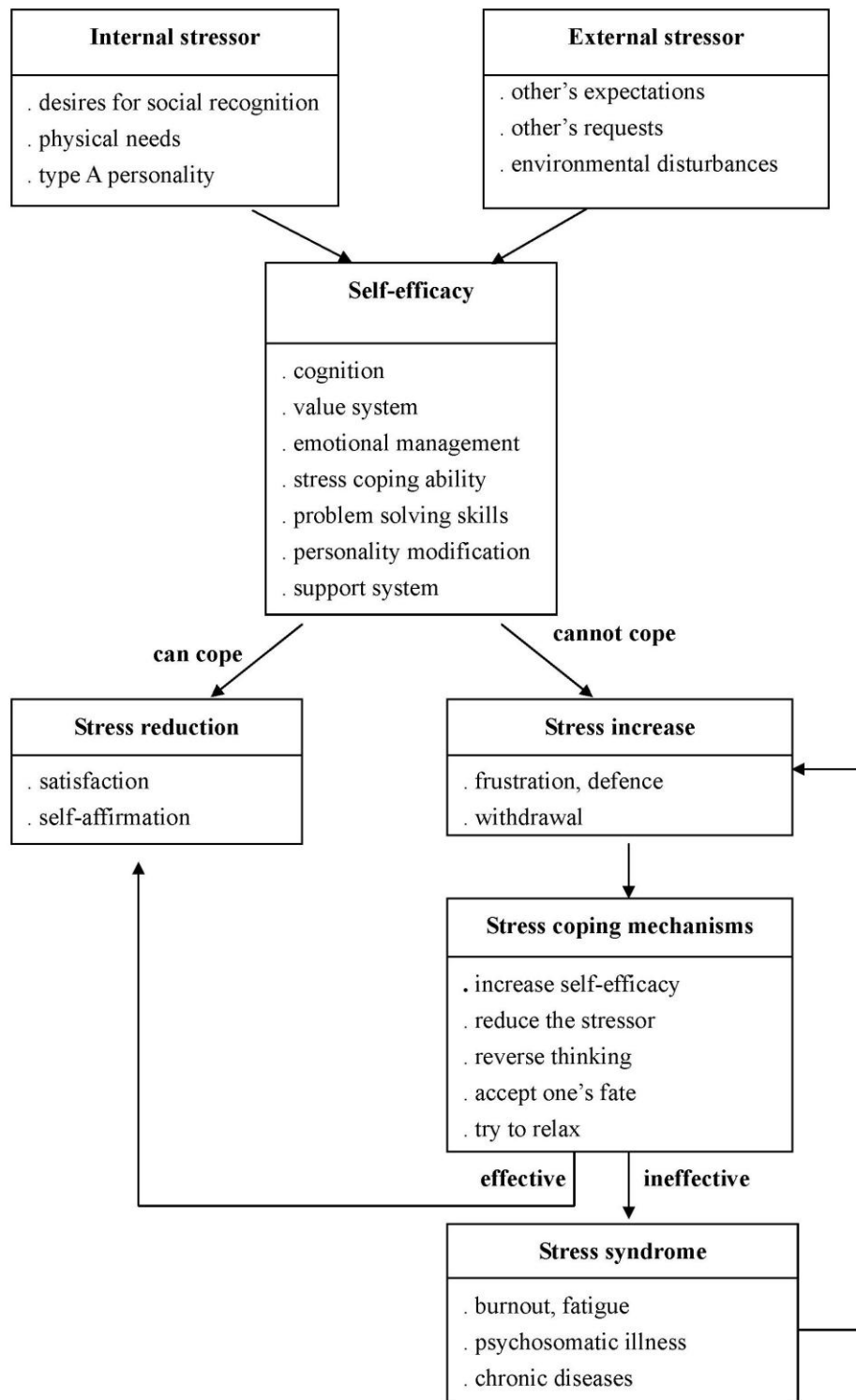


Figure 1-2: A flow chart of the stress coping process

The dynamic of the stress process as shown in Figure 1-2 was modified from the

basic description of Lazarus (1966) that stress arises if the demands of the situation exceed individual ability and resources. These demands could come from external loadings or be created by our wants. Basically, one's stress level would be reduced if the loading can be lightened, no matter whether the stress originates from internal or external demand. In meeting pre-existing stressors with adequate self-efficacy, we can muster resources to overcome problems as much as possible, utilizing coping capabilities and emotional reserves to meet the demands. In contrast, if one's efficacy is inadequate to deal with the situation, then one's stress would increase, and one would be left frustrated, withdrawn, or defensive. Later on, one might try to activate one's stress coping mechanisms to attempt some adjustment, endeavour, or compromise. However, if that failed most of the time to restore one's capability and resources, the result might be chronic stress syndromes, such as psychosomatic disorders, fatigue, or depression. Finally, the stress load might accumulate and feedback into increasing loss of self-efficacy, i.e., a vicious cycle. In sum, it is impossible to eliminate unexpected external loadings, but psychological stress can be lessened. This may involve the power of positive thinking and active response.

1.5.5. Possible ways of reducing stress

We cannot deny the fact that stress accompanies us throughout life, and we should not expect to get rid of all stress because there will be new stress tomorrow and this will never end until we die. Actively speaking, stress coping does not mean eliminating all

stress, but appropriately applying these stresses to life, e.g., adopt positive thinking to transform crises into opportunities. Some people deem each stressful event as an opportunity or a turning point in life; but some people deem it as a burden that needs to be eliminated, and this evokes negative emotions, as well as making hormones become imbalanced. Thus, one's responses to stress are not definitely related to the amounts or types of stress, but related to one's subjective interpretation of the stress, that is to say, one's coping ability may depend on one's confidence and self-appraisal toward the stress. Zhuang Zi's concepts of life may offer another perspective to reevaluate stress, and may influence ways of coping with stress.

Experts in stress reduction have already developed many theoretical bases and implemental approaches to help people cope with a variety of stress. However, cognition oriented strategies will be adopted in this study due to the significant role of cognition in stress coping. Likewise, the psychoanalysis school emphasizes the notion that understanding the causes of an emotional state, enables us to mitigate or control the emotional state (Freud, 1975). Also, Cohen (1995) argued the alleged dichotomy between emotion and belief. He indicated that the ability of thinking critically and logically will help reduce stress, because beliefs can powerfully influence how one feels about a situation.

In 1997, I participated in Dr. Albert Ellis' Rational-Emotive Behaviour Therapy (REBT) workshop in Taipei. I deeply experienced how he challenged clients'

viewpoints and pointed out their irrational thinking, for example, absolutistic musts and shoulds, awfulizing, low frustration tolerance, damning oneself and others. He skilfully led clients to a positive and rational way of viewing things that resulted in desirable emotions and behaviour consequences. Ellis' REBT therapy enabled me authentically to see the benefit of loosening clients' negative thinking and blind spots, which is an essential component in the therapeutic process.

1.5.6. Bibliotherapy can be an effective approach in stress coping

Reading is the most powerful, profound, systematic source of ancestors' accumulated wisdom, which is handed down to the descendants, and a source of a great progress in culture. However, many people do not like to spend time to read, instead, they like to watch TV or multiple media with vivid information. This phenomenon has rendered people more superficial, commercialized, and less inclined to reflect on humanity. Thus, the United Nations Educational Scientific and Cultural Organization (UNESCO) encourages people to read and in 1995 designated April 23rd a "World Book and Copyright Day" for world literature. The date was chosen because several world prominent authors died or were born on this day, e.g., William Shakespeare died on this date in 1616 (<http://portal.unesco.org>). The purpose was to promote the established practice of reading, encourage people to discover the pleasure of reading, especially those authors who made great contributions on the progress of humanity, purify the mind, and raise awareness of protection of intellectual property through

copyright as well. Reading valuable books is deemed a fundamental way to find the solutions or answers for problems.

Counselling is an open system, not dogmatic and immutable. Instead, questioning is always encouraged, and it could contain many potential idiosyncratic components from special experiences in the process of therapy (McLeod, 2001). Also, Robinson & Gross (1986) expressed that intellectual curiosity is an inherent distinctive characteristic in human beings. In this study, an open and interactive therapeutic process is expected to help students explore themselves and solve their problems. Bibliotherapy is employed for this purposes.

The aim of bibliotherapy is to prevent psychological disturbance, help behavioural misadjustment, and promote interaction between literary works and individual characteristics (Schrank, 1982). This approach is feasible for any type of client or counsellor, because the professionals can select the most suitable types of reading materials which have a positive perspective on the client's problems. Reading materials are manifold, such as books, picture books, world literatures, poetries, fictions, fables, films, etc. They also includes various themes, content and different languages and editions; there may even be academic or humorous editions on the same theme. These wide choices make it easy to match the individual's interests, needs and propensity. Any kind of problem can be found in the relevant reading materials, depending on how familiar and proficient the professional is in selecting and guiding appropriate reading

resources. However, most bibliotherapeutic materials which have proved to be effective are western readings. In this study, in contrast, Chinese readings, Zhuang Zi's fables, with which I am familiar, are adopted in the hope of making some lasting contribution to helping people reduce their stress. In this era of rapid change and multiple values, living happily and meaningfully is the fundamental way to cope with the stress in life.

Furthermore, some terms in this study are abstract, and need to be defined in detail, or need concrete descriptions instead of conceptual definition. Also, high-inference behaviour needs low-inference behaviour as evidence. Some important terms in this study are defined in Appendix 1-3, Glossary of terms.

This study is to explore the impact of bibliotherapy adopting Zhuang Zi's fables, and to investigate whether it can help students cope with their stress. An outline of this study is as follows:

Chapter One: College freshmen are the target population for researching the influence of bibliotherapy on stress coping in this study. An overall description is given concerning stress phenomena among this generation, and the possible stress coping mechanism is discussed.

Chapter Two: The definition and application of bibliotherapy are reviewed. Based on its origin, development, and theoretical aspects, bibliotherapy has a feasible process, and relevant criteria for recommending reading materials. Undeniably, multiple media seem to be more popular recently in

application of bibliotherapy, so DVD films would be applied as the complement.

Chapter Three: The selected readings from Zhuang Zi's fables are the designated reading materials of this study, which are expected to help students reflect on their thinking, values, and life patterns, which further helps in coping with stress, especially in the society with computerised lifestyles and prevailing commercial activities.

Chapter Four: A quasi-experimental approach will be implemented due to the difficulty of random sampling. The research design sets up three groups: a bibliotherapy with discussion group, a self-help group, and a control group. All groups are subjected to pre-test and post-test, including Philosophical Beliefs toward Stress Coping Inventory (PBSCI), Stress Level Scale, and Interpersonal Behaviour Survey (IBS).

Chapter Five: All the data are analysed to demonstrate the outcomes after bibliotherapy, including analysing demographic variables, levels of cognitive changes, stress reduction within groups and among groups, also conduct correlation and prediction analysis.

Chapter Six: Discussion of the main findings, and the implications of bibliotherapy intervention. Finally I point out the limitations of this experiment, and recommend practical interventions to deepen or enrich this study.

1.6. Summary

The purpose of this study is to find feasible ways for Taiwanese college students to cope with stress phenomena. These students belong to the so-called “strawberry generation” in Taiwan: they are good at accessing electronic resources, hooked on electronic communication and games, and insist on their own style and creativity, but they are less tolerant of frustration, and less resistant to stress, compared to the previous generations. Not all stresses are threatening. Positive and moderate stress, such as midterm exams, can stimulate development of our potential; but negative or overstress, such as overwork, may damage our life. Nevertheless, if the stress situation can be well controlled/ managed by the individual, this may reduce the loss of social resources caused by stress. Also the coping mechanism would help people maintain good mental hygiene and foster a sense of well-being.

Most people’s emotional and behavioural consequences are influenced by their cognitive thinking, which is the rationale of Ellis’ Rational-Emotive Behaviour Therapy (REBT). Readings are a feasible medium to deliver various messages to silently influence peoples’ thinking and behaviour. In past times, peoples’ emotional balance in society was adjusted through various reading and performance materials such as tragedies, comedies, religious, or didactic works, which served to release sorrow, promote emotional catharsis, or sublimate the spirit. Moreover, readings are also a suitable implement for reaching peoples’ repressed emotions. Thus, skilfully using

literary works and rhetorical expression might be able to touch one's heart easily and enhance the motivation to open one's heart and discover the causation of problems. The overall rationale and technique for coping with stress through reading materials will be discussed in the next chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1. Historical review

Bibliotherapy is not an innovative form of intervention, and the method has been previously documented in many remarkable articles. A number of relevant recent studies place a greater emphasis on its applications, and mainly examine its efficacy and effectiveness; however, there is less discussion about its radical framework, or deep exploration with a view to theory-building. For this reason, some articles cited in this study are quite outdated. In order to establish bibliotherapy's origins, a chronological review of its inception, development and impacts is provided in Appendix 2-1: A chronological development of bibliotherapy.

In 1916, Samuel McChord Crothers, an essayist, first coined the term "bibliotherapy", derived from the Greek *biblion*, book, and *oepatteid*, healing (as cited in Rubin, 1978a, p.1). The use of reading to improve mental health can be traced as far back as Aristotle (384- 322 B.C.), who believed that tragedies are the highest form of art because in reading them, people are able to cry and experience catharsis through the release of negative emotions and pain (Morrison, 1987; Hynes & Hynes-Berry, 1986). Indeed, the ancient Greeks inscribed the words, "The Healing Place of the Soul", on the entrance to the library at Thebes (Zaccaria & Moses, 1968). At that time, people who were sick or suffering from mental disorders were encouraged to read such materials as

tragedies, religious works or fiction to purge their minds and sublimate their spirits. Thus, bibliotherapy has played an important role in the domain of medicine and theology since ancient times.

From the 1930s to 1970s, bibliotherapy was used in hospitals in the treatment of veterans and psychiatric patients (Pomeroy, 1927; Alston, 1962; Alexander & Buggie, 1976). Later it was employed by counsellors to help sufferers of mental illnesses become more aware of themselves, and to improve their problem-solving ability or ability to cope with stress. Bibliotherapy gradually became multifunctional, with treatment conducted not only in the clinical domain, but also in developmental domains. The future of bibliotherapy will depend upon how flexibly and effectively its applicability can be renewed, to give it a more practical role in life skills.

In recent times, in addition to fiction reading materials, bibliotherapists often provide or recommend professional self-help books and manuals, or multimedia and computer-based programs to increase the efficacy of therapy, and reinforce it. These transformations in bibliotherapy's applications over time seem to confirm its usefulness and encourage the development of new approaches to apply its principles within a modern context.

2.2. Definitions and objectives

Since 1961, bibliotherapy has been defined in Webster's Third New International Dictionary as "The use of selected reading materials as therapeutic adjuvants in

medicine and psychiatry; and as guidance in the solution of personal problems through directed reading". Russell (1958) described bibliotherapy as the application of relevant literature to deal with the client's personal problems and developmental needs at the proper time.

The use of selected reading materials to help in the psychological healing process has been denoted by various terms, such as reading therapy, literature therapy, poetry therapy, therapeutic reading, biblioguidance, bibliocounselling, etc. However, most help professionals have adopted and recognized the term "bibliotherapy", which stemmed from two roots: *library science*, such as offering reference services, reading guidance, and holding book-based discussion programmes; and *psychology*, using a recommended set of reading materials and accessing therapeutic principles through books (Rubin, 1978a). From the beginning, the two approaches worked interdependently, and bibliotherapists have become ever more proficient in selecting appropriate reading materials for use in psychotherapy.

Further, counselling is a process involving subjective experiences on the counsellor's and client's side, no matter what reading contents are assigned. For instance, the therapist may think questions sufficiently interesting and reflective to induce the clients to engage in discussion, but it may not work. Or some clients may be deeply influenced by the process of reading a book, but it may not work well on other clients. Thus, the counsellor's keen observations, therapeutic relationship and

interaction with the client are also influential factors, apart from the appropriateness of the reading materials.

Thus, bibliotherapy is not used in praxis as the sole form of treatment; instead it is defined as “an adjunctive tool”; “adjunctive bibliotherapy” is a complementary therapy to be used in combination with other forms of psychotherapy (Campbell & Smith, 2003; Pardeck & Markward, 1995). For example, it can be combined with psychoanalysis, writing therapy, poetry therapy, cognitive therapy, philosophical counselling, etc. For instance, some cognitive counsellors suggest that clients read some didactic materials as a complementary medium (Ellis, 1969). They, however, still greatly emphasize their particular therapy techniques: disputing clients’ irrational and negative thinking as the dominant mission in the process, assigning reading material that merely provides an example to help illustrate causality, or providing a reminder of some central knowledge. In such cases, this added value of bibliotherapy can activate the application of the mainstream psychotherapy, particularly if the clients like to read. However, the role of adjunctive bibliotherapy will be reduced compared with integrative bibliotherapy, i.e., bibliotherapy with follow-up activity, in which bibliotherapy is the major therapy.

As Riordan and Wilson argued (1989, p. 507), “The real question is not whether bibliotherapy is or is not effective as a separate therapy but rather how and when it should be used as part of a treatment programme”. Indeed, the bibliotherapist’s skill and proficiency in application is the key issue, otherwise, the result might be what the

Chinese call “drawing a tiger, but ending up with the likeness of a dog”; that is, a poor imitation and awkward performance, which could greatly decrease its feasibility.

Zaccaria and Moses (1968) explicitly emphasized that simply reading a specific book cannot constitute bibliotherapy; it must be complemented by follow-up activity such as discussion, counselling, art therapy and so on. This argument is generally accepted by most practitioners of bibliotherapy. However, more and more self-help materials/ manuals prescribed by the trained therapist, with minimal therapist contact or even no therapist contact, are also deemed as a type of bibliotherapy, i.e., totally self-help bibliotherapy and minimal therapist contact bibliotherapy, as shown in many journal articles. Excluding this self-help type, bibliotherapy will be strictly defined for the purposes of the present work as the use of selected reading materials as a medium in problem-solving or development needs, involving follow-up activity under professional psychological guidance, or combined with another form of psychotherapy.

2.2.1. Bibliotherapy as a science or an art

Brown (1975) divided bibliotherapy into two parts: (1) prescribing selected readings to heal mental or physical patients, which may be called “the science of bibliotherapy”; (2) giving directed reading suggestions to rectify personality defects or aid problem-solving, which can be regarded as “the art of bibliotherapy”. Another way of seeing the distinction is to view the former as like clinical bibliotherapy conducted by medical professionals, while the latter is like developmental bibliotherapy, conducted by

non-medical professionals. Today, when some non-medical bibliotherapists adopt self-help materials, this may be seen as a kind of science with the support of empirical evidence by quantitative researchers, so that science is not confined to the field of clinical bibliotherapy.

As a science, bibliotherapy as directed therapy should include some techniques or procedures for interacting and sharing the literature between a client and therapist (Pardeck, 1993). Indeed, for it to be truly a scientific approach, the therapist should design a deliberate plan for the client, rather than just the more casual recommending of a book. Also, bibliotherapy can be conducted through scientific and statistical analysis, by documenting results in terms of reliable and predictable therapeutic effects, whether it is clinical or developmental bibliotherapy.

As an art, the use of fictional materials in bibliotherapy can be used in conjunction with qualitative analysis, through discussing the client's or story character's subjective response to the book's contents, to reveal deep emotions or value judgments, which are difficult to measure objectively. The aim here would not be to discover universal reality, but instead to emphasise individual differences, unique experiences, inner implied meanings and what they contribute to people's life experiences.

Indeed, Jones (2001) went so far as to maintain that as an art, bibliotherapy is nondirective, and may take place without any intervention by a practitioner. Clients are self-directed and can choose what they want to read. However, this is rather like

everyday reading, lacking valid evidence of therapeutic effects. This description appears to devalue the usefulness of the art itself, which is immeasurable, and complicated to evaluate, since as a story unfolds, it is necessary to analyse its dynamics to uncover symbolic meaning and motivations, and infer causality. Evans (1971), a British educational psychologist, claimed that bibliotherapy is an art, and he emphasised the need to see the client first in the situation, rather than to see the situation first. He also suggested that literature is to be considered a tool to understand more about the client, rather than a means for treating /manipulating them. Since human feelings are subjective, subtle, or fragile, the practitioner needs to discover the client's inner world carefully and comprehensively.

Another perspective on the "therapy as art" approach is Habermas' (1990) assertion that Freud's psychoanalysis and Marxism are "pseudoscience", "because they straddle normal and abnormal discourse, refusing to fall on either side of the dividing line" (p.248). Such approaches also accept, Counterevidence, for instance, sometimes inferiority can be analysed into superiority and sometimes it also can be interpreted as itself (inferiority). There is no objective standard by which to judge such spiritual, emotional, and highly subjective phenomena, in Habermas' view. Actually, it could be argued these analyses need the therapist's keen sensitivity and occupational experiences which are accumulated and integrated over many years. This kind of professional ability tends to belong to the artistic side of psychotherapy.

2.2.2. The distinction between general reading and bibliotherapy

What are the features distinguishing bibliotherapy from general reading? General reading can take place anytime, in any place. One can choose books with any theme of interest; one can also discuss books in study groups, and share the feedback without any diagnosis or assessments. In contrast, bibliotherapy is a professional approach to help people dealing with their problematic psychological issues. It needs a well-trained therapist to ensure the therapeutic utility, protect clients from harm, and protect clients' rights and privacy. The process always begins with diagnosis and ends with assessments to ensure therapeutic utility. Moreover, discussion intervention needs to be designed; the questions need to be directed to clients' personal issues, and able to activate reflection and integration. In addition to being equipped with the required counselling skills, such as empathy, understanding, acceptance, catalyse, and group dynamics, bibliotherapy counsellors also need to have mastery of literature, or know other reading materials for specific purposes. Counsellors should be able to recommend appropriate books, or other visual-audio media, to match clients' problems and needs.

2.3. Types of bibliotherapy

According to Jackson (1962), bibliotherapy is divided into two sorts: One is "implicit bibliotherapy", regarded as the resources of culture suggested by the reader's advisors; the other is "explicit bibliotherapy", used only by trained therapists. Apart from this above classification, there are further discriminating differences that must be

identified between the following categories:

2.3.1. Individual vs. Group bibliotherapy

Generally speaking, group bibliotherapy is more often practised than individual bibliotherapy (Hynes & Hynes-Berry, 1986). Rubin (1978a) considers it better to conduct bibliotherapy in a group setting, because individual bibliotherapy is viewed only as a refinement or variation of reader guidance. Although the individual context allows for more discussion and sharing of responses to a story and interaction of its characters, it lacks the group dynamic, for stimulating different ways of thinking about a situation and learning from the responses and interpretations of others. Rubin also applied bibliotherapy to the following three settings: (1) institutional bibliotherapy, applied in the form of individual or group therapy, and using didactic materials that aim to help psychiatric patients or prisoners; (2) clinical bibliotherapy, using group therapy with imaginative literature to help clients with emotional or behavioural disturbances; and (3) developmental bibliotherapy, using group therapy to help normal people cope with stress or crisis situations. This tends to be basically a distinction between individual vs. group therapy modes. It seems only more severe or special cases are best suited to individual therapy; in other cases, often the adoption of group therapy is more suitable. Individual bibliotherapy (one-to-one interactive bibliotherapy) can make clients feel freer to express themselves, especially for shy people. It can be tailored to individual needs; and be practised privately at one's own pace (Stanley, 1999). This

personalized access is suitable in cases where clients may not fit with others even if they confront the same problems. In fact, which is the better choice between individual and group modes primarily depends on the nature of the client's problems, characteristics and needs.

2.3.2. Adjunctive vs. Integrative bibliotherapy

Bibliotherapy is most often viewed as an adjunctive or integrative therapy, depending on what range of psychotherapy is involved. In adjunctive bibliotherapy, reading materials are utilized as a type of homework for initial understanding, further information, or as compensation for clients failing to attend the therapy regularly (Campbell & Smith, 2003). The adjunctive mode is like “an add-on” to the main counselling; it is complementary to the therapy, although it has less influence on the structure and process of the psychotherapy.

Integrative bibliotherapy, in contrast, is the application of reading materials related to the client's current problems, incorporated into the therapy sessions. The materials combine reading (visual) and discussion (auditory) into various learning modalities in sessions, which helps accelerate client's development, and extends the treatment to the clients' daily life. The integrative mode seems to be more dedicated and organised in proceeding with the readings. It assimilates and incorporates some techniques of mainstream counselling, and makes practical contributions on complex issues. This appears to be a more individual and complex mode, in which the bibliotherapy has a

much more central role in the counselling process.

2.3.3. Clinical vs. Developmental bibliotherapy

Morris-Vann (1979) made a distinction between “clinical bibliotherapy” and “developmental & protective bibliotherapy”. Also, Doll and Doll (1997) distinguished between “clinical bibliotherapy” performed by the trained mental health professional, and “developmental bibliotherapy” used in school settings. Developmental bibliotherapy can be used for supportive/informative purposes (e.g., problem-solving, stress coping, personal growth, decision-making, career planning, weight management, assertiveness training). Counsellors can play a catalyst role to help clients be more aware of themselves and increase their ability to deal with problems. By contrast, clinical bibliotherapy refers to bibliotherapy’s scientific aspect, such as treating diagnosed disorders (e.g., depression, panic, anxiety, eating disorders). The facilitator may be a clinician or psychiatrist. Synthesising the above discussions, the contrast between clinical and developmental bibliotherapy can be organized in several categories, as shown below:

Table 2-1: Contrasting clinical and developmental bibliotherapy

	Clinical bibliotherapy	Developmental bibliotherapy
Goal	Remediation: prescribing selected readings to heal mental or physical patients	Development/Prevention Supportive/informative purposes: giving directed reading materials to aid problem-solving

Format	Group/Individual level	Group/Individual level
Practitioner	Psychiatrist (medical)	Counsellor (non-medical)
Client	Mental disorders, psychiatric patients, prisoners	Normal person, someone with problem or crisis
Setting	Hospital/Clinic Mental health institute	Counselling centre Educational settings
Aspect	Science	Science/Art

2.3.4. Self-help approach vs. Bibliotherapy

Campbell and Smith (2003) asserted that “bibliotherapy refers to active use of books in psychotherapy rather than a self-help approach in which the individual conducts self-directed parallel reading” (pp.177-178). They are quite different in the range of materials chosen. Bibliotherapy can adopt fiction as well as self-help materials, whereas the self-help approach mostly adopts self-help materials/manuals. However, in the educational and developmental domains, some fictional content with explicit instructions and applications concerning certain problematic themes can also be applied effectively in the self-help approach. Fictional reading materials facilitate clients’ reflection and insight, establish positive thinking, and release negative emotions. However, there is a high risk if the clients are immature or misunderstand the self-help materials/manuals in a certain self-help approach without therapist contact. Merely

prescribing self-help books is often not enough to be effective. Adding other interventions or psychotherapy would yield greater benefit.

According to the degree of clients' reliance on therapist involvement, Glasgow and Rosen (1978; 1979) differentiated the following four types of self-help approach: (1) Self-administered approach: there is no contact with the therapist and a written treatment programme is the sole basis for the therapy. i.e., it can be used as a stand-alone approach; (2) Minimal-contact approach: clients rely mainly on a written treatment programme, and have only minimal contact with the therapist, such as weekly mail correspondence, phone calls, or in frequent meetings; (3) Therapist-administered approach: in this procedure, the therapist has regular contact with the clients, gives instruction about how to use the materials, clarifies the information in a self-help manual, and discusses with clients the self-help materials in regular sessions; (4) Therapist-directed approach: rather than relying on self-help manuals, the therapy is entirely directed by therapist, and the self-help materials are recommended as an adjunct to conventional therapist-directed therapy by most clinical practitioners. Instances from British daily news show the popularity of this approach in medical settings. The psychiatrist may, for example, prescribe patients with minor depression some books which contain an introduction to psychosis, to help these patients to be more aware of their sickness, and understand how this disease influences their thinking and behaviour. Also, they may prescribe self-help books to help them reduce negative emotions.

Clients go to the local library to borrow the books, and read at home, and go to clinic to take traditional psychotherapy once a week. This auxiliary material can be of some help, but great care must be taken in case the client misunderstands or distorts the text.

The above categorical descriptions were modified by Newman, Erickson, Przeworski and Dzus (2003) into four categories: (1) Self-administered therapy: therapist contact is for assessment, at most; (2) Predominantly self-help treatment: beyond assessment, the therapist teaches clients how to use self-help tools and provides a therapeutic rationale; (3) Minimal-contact therapy: the therapist is involved actively, yet to a lesser degree than in traditional therapy; (4) Predominantly therapist-administered treatment: contact is made with the therapist in regular sessions. Ultimately, no differences are evidenced between bibliotherapy and the therapist-administered self-help approach in terms of therapist involvement (Marrs, 1995).

According to the definition of bibliotherapy mentioned previously, it requires follow-up activity or other intervention under professional psychological assistance. Thus, therapist-administered, therapist-directed, and predominantly therapist-administered treatment are regarded as equivalent in foundation to bibliotherapy. Abstracting the above classifications, develop the model of a continuum can be categorized into four types on the basis of therapist involvement (see figure 2-1):

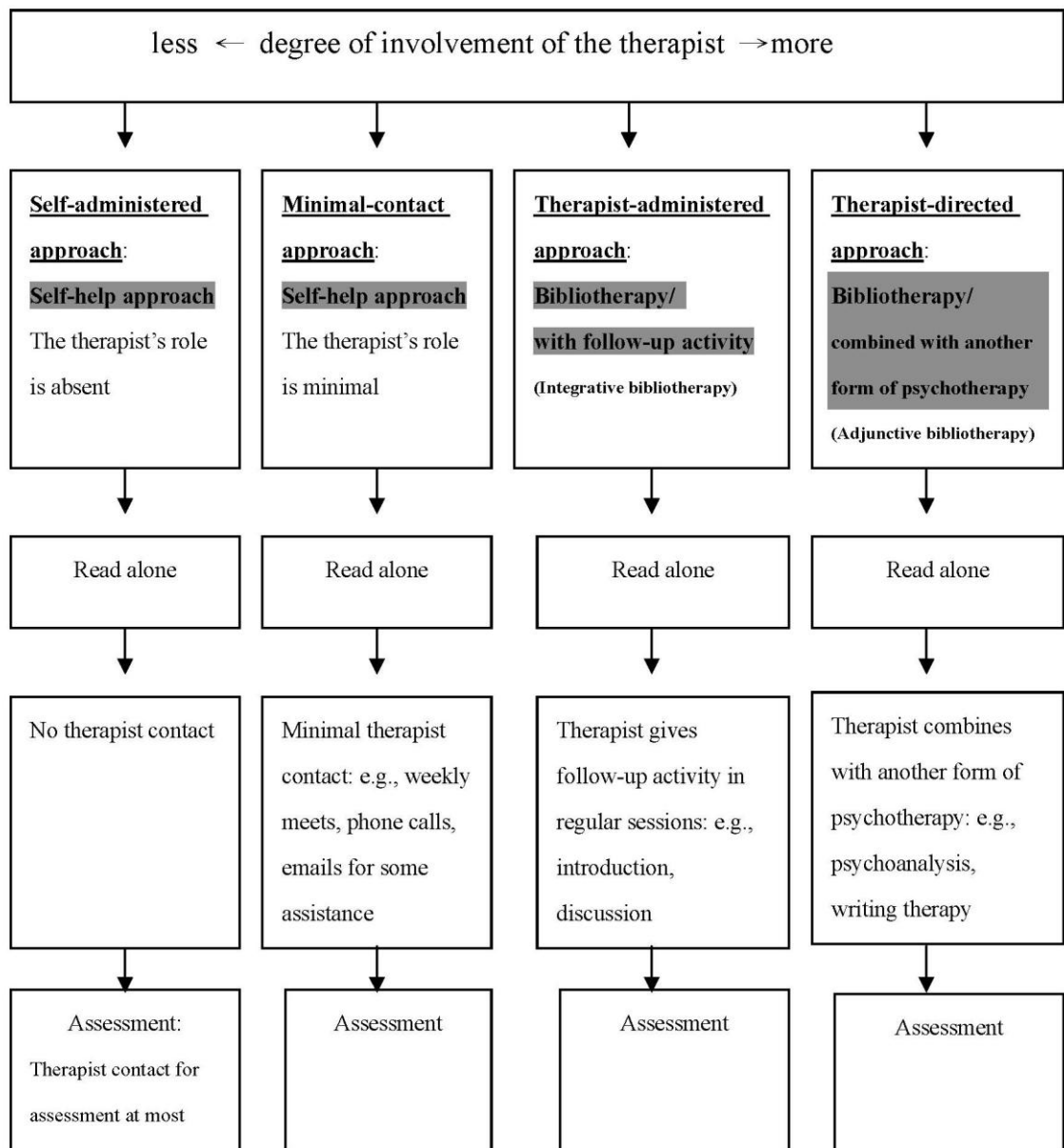


Figure 2-1: The self-help – bibliotherapy continuum

In my mode, “the therapist-administered approach” is regarded as equivalent to bibliotherapy with follow-up activity, which proceeds in the experimental design of this thesis. The other forms of bibliotherapy parallel to the above modes is the “Therapist-directed approach”, where it is combined with other forms of psychotherapy; the “Self-administered approach” and “Minimal-contact approach” both really match

the traits of the “self-help approach”. Throughout this thesis, the experimental design of the self-help approach is based on the structure of the Self-administered approach; however, the counsellor did meet the participants in a regular standard class, but did not instruct them on or discuss any relevant reading materials. Moreover, one thing that needs to be emphasised is that the clients need to be protected and helped by a professional practitioner, no matter whether self-help or fictional reading materials are used. As Zuckerman (2003) indicated, when clients, potential clients and information seekers are directed to a self-help approach, they must be assured of confidentiality, that they are not alone with their problems and be treated with professional respect.

2.4. The advantages and disadvantages of the self-help approach

Regarding who would benefit from a self-help approach, Rosenbaum (1980) indicated that individuals with a stronger self-control and self-regulatory efficacy tend to be encouraged to solve problems through self-help books. Besides, for some types of clients, a totally self-help (self-administered) approach with no therapist contact may be preferable, for example, if they dislike regular psychotherapy and refuse any ongoing new treatment sessions, have a problem of geographic distance, or live in isolated communities without any therapists (Ellis, 1993). In addition, those who are highly defensive and reluctant to disclose themselves can also benefit from this approach.

In contrast, as Mains and Scogin (2003) indicated, some clients who have personality disorders, emotional avoidance, poor concentration, poor memory,

interpersonal difficulties or low motivation benefit less from self-help treatment, and are better served by more intensive traditional treatment. Thus, not everyone is suited to the self-help approach, and no one method can fit all people. Consideration needs to be given to clients' nature, characteristics, motivations, interest in reading or not, time, unhappy experiences, conditions, location, resources, etc. Selection of the appropriate method to fit a particular client appears to be extremely important.

What benefits can the self-help approach provide? Starker (1992) provided evidence of the effectiveness of self-help books, based on data collected over three months, among patients attending any of the medical clinics at an urban department of Veterans Administration (VA) medical centre. The patients all participated voluntarily. One hundred and sixty-six valid questionnaires were received from six clinics as follows: Hypertension, 44; Chronic Pain Management, 22; Cardiology, 18; Gastroenterology, 42; Woman's Health, 20; Endocrinology/Diabetes, 20. There was an imbalanced distribution in gender, with males representing 82.6% and females 17.4%, however, this reflected the typical proportions in the VA population. Age ranged from 22 to 80, the mean age was 56.8.

Starker's questionnaire consisted of 116 true-false items, which included health-related attitudes, beliefs and behaviours. They measured availability of social support, attitudes towards medication, emotional distress, and so on. One item was particularly concerned with the reading of self-help books. All the respondents answered

the questionnaire while in the waiting area of the clinic, or completed it at home and mailed it back with a stamped envelope. All the data were analysed through chi-square procedure.

Starker summarized the important findings as follows: First, in the self-help item, 85 participants affirmed readership, while 81 denied readership. Thus, the samples were divided into two approximately equal groups: self-help readers and non-self-help readers. No specific self-help books are mentioned in the paper; the self-help books may have been prescribed by participants' own physicians, health-care workers, or self-selected by the patients. Affirmation of readership of self-help books was well distributed among the diverse clinics: Hypertension, 47.7%; Chronic Pain Management, 50%; Cardiology, 50%; Gastroenterology, 47.6%; Woman's Health, 75%; Endocrinology/Diabetes, 45%. No association between self-help readership and gender could be detected, because too few female participants went to the VA clinics. More than half the respondents indicated that they enjoyed reading self-help books about their medical difficulties. Moreover, the findings challenged the stereotypical view of self-helpers as lonely, isolated, pathetic souls with only their books to turn to for solace, nor were books a substitute for human contact. For example, in the item, "I have close friends", there was a significant difference between self-help readers and non-self-help readers (Starker, 1992). Lastly, self-help readers had better understanding of their health problems and treatment, a more positive outlook, and greater levels of social

engagement and support than those who did not read self-help books. One of the tables of the results is illustrated in Appendix 2-2: The prescriptive analysis of Starker's questionnaire items/self-help readers vs. non-self-help readers.

Moreover, self-help materials have been found effective in reducing fear and anxiety, according to meta-analyses (Gould & Clum, 1993; Marrs, 1995). Apodaca and Miller's findings (2003) showed the validity of using self-help materials in reducing risk and harm from drinking. Newman et al. (2003) indicated that "Self-help materials, brief therapies, and treatments involving minimal therapist contact have all been proposed as potential solutions to the dilemma" (p.252). The self-help approach can expedite treatment outcomes by applying complementary media such as written materials, the internet, or film (Scogin, 2003). Other benefits of the self-help approach are that it is cost-effective, saves time and money, and is quite flexible and convenient, as it is possible to access treatment at any time, pace, and place, on any issue, on one's own.

From another perspective, clients may receive deep-felt harm if they are treated by a therapist who is inexperienced or unconsciously projects his/her problems onto clients with a lack of objectivity. In such circumstances, greater use of self-help materials and minimal therapist contact may protect clients from such harm, and diminishes the awkward relationship between client and therapist. This kind of curative relationship, called a "therapeutic alliance", is supported increasingly across lines of therapeutic modality, and substitutes for the centrality of the relationship between client and

therapist (Horvath & Symonds, 1991). Indeed, this mode feasibly provides another alternative to match different demands of clients. Moreover, self-reward may be an important element/process that brings potential benefits beyond our estimation, for example, increased emotional satisfaction, encouragement to go further, and a positive attitude. Although self-reward is usually ignored, it is strongly recommended to be integrated within the self-help approach.

2.4.1. The self-help approach in the absence of a therapist can really help clients or not

Although there are various forms and degrees of therapist contact, the evidence shows that it is more effective with regular therapist check-ins, or when clients are required to come to a clinic regularly as part of the self-treatment programme.

Totally undirected self-help is hazardous, sometimes, as indicated by Rosen (1976): “Consumers run the risk of purchasing treatment programmes that may be ineffective or harmful when used on a totally non-prescriptive basis” (p.140). Besides, Zeiss (1978) found that with immature individuals, a totally self-administered approach was often unsuccessful, because self-help materials may be distorted by idiosyncratic interpretation from different clients. For example, the Bible can be interpreted as calling for charity and forgiveness of sinners, though not of their sin. However, it also can be interpreted by some people to indicate self-damnation or to curse others, e.g., consignment to Hell. Further, it is less effective or results in counteraction in dealing

with “difficult people”, such as those who are suicidal, homicidal, overly impulsive, psychotic, and so forth. With the exception of such groups, it is found that progress is better and faster in therapy when the clients simultaneously use self-help books, pamphlets, or cassettes (Ellis, 1993).

However, Newman et al. (2003) indicated that it is rare to find a treatment study without therapist contact for anxiety disorder. At least, there should be a pre-assessment, a therapist-delivered rationale, and an introduction to the self-help tool. Similarly, Cuijpers (1997) also portrayed that clients can use self-help materials to help themselves without major help from the therapist, but at least need the therapist to tell clients about the treatment method in sufficient detail, and not just give the information. Thus, it is preferable if self-help materials/manuals are prescribed and supervised by a trained therapist, who can give consultation or evaluate their effectiveness, even though self-help manuals may have high validity.

2.5. Bibliotherapeutic materials

Hynes and Hynes-Berry (1986) explained that “In interactive bibliotherapy, a trained facilitator uses guided discussions to help the clinical or developmental participants integrate both feelings and cognitive responses to a selected work of literature, which may be a printed text, some form of audiovisual material or creative writing by the participant” (p.17). They also indicated that selected reading materials can be in the form of extracted paragraphs, full text, or abridged sections. The role of

bibliotherapeutic materials is as a medium or preventive tool. They should reflect the psychological mood of the client and must be related to the client's problems, but not necessarily identical with them. It is also better to avoid complex or redundant content with extraneous details, in order to make clients less frustrated, and enable them to make rapid progress, feel achievement and enjoy reading.

Nowadays, bibliotherapy does not use only reading materials as a medium to help clients, but also applies various options such as talking books, audio-visual materials, film, and computer-based programs. The availability of more alternatives with wide appeal will help to extend the involvement and increase the efficacy of bibliotherapy. Basically, the materials can be primarily divided into two types: one is printed materials, the other is non-printed materials.

2.5.1. Printed materials

Rubin (1978a) delineated bibliotherapy as “a programme of activity based on the interactive processes of media and the people who experience it. Print or nonprinted material, either imaginative or informational is experienced and discussed with the aid of a facilitator” (p.2). He also classified prescribed readings into: (1) didactic literature (informative literature): employed in hospital settings; (2) creative literature (imaginative literature): employed in educational settings or the community. However, didactic materials are no longer employed only in hospital settings; they can also be employed in a counselling setting, especially as self-help materials.

In the mid 19th century, most children's books were didactic, with strong religious content, which urged them to reject the temptations of the material world. In the late 19th century, adventure stories were popular, e.g., Lewis Carroll's *Alice in Wonderland* and Frank Baum's *The Wizard of Oz*. However, in the early 20th century, novels for young adults tended to have a moralistic and sentimental style, e.g., the Hardy Boys and Nancy Drew series. In 1951, J. D. Salinger published *The Catcher in the Rye*. After that, young adult novels represented more realistically such topics as teenage pregnancy, abortion, suicide, AIDS, etc. Thus, the genres of literature used in bibliotherapy for young adults have gone from didacticism to sentimentality to realism (Miracle, 1995). The recommended themes for children and youngsters to read range are from religious, moral, sentimental, encouraging to the recent more realistic social problematic context. This development is to fit better with the individual's psychological needs instead of emphasising conformity to social expectations or repressing a person's inner conflict.

J. T. Pardeck and J. A. Pardeck (1993) differentiated reading materials into two types, fiction and self-help books, both of which can be viewed as an adjunct to therapy. The following definitions will be adopted in the coming chapters.

2.5.1.1. Fiction

Fictional works include novels, dramas, adventure stories, science fiction, poetry, fairy tales, fables, folklore, inspirational readings, and other imaginative materials. The themes of such fictional works must relate to the client's confronting problems. Some

bibliotherapists prefer to apply classic literary works which have passed the test of history and encapsulate predecessors' precious successful experiences and authority.

2.5.1.2. Self-help materials

Essentially, bibliotherapy should encompass curative effects for particular purposes and problems, to differentiate it from general reading. Generally, nonfiction resources are for information gathering and understanding. They can be written materials such as self-help books, manuals, workbooks, informative materials, do-it-yourself books, etc. Self-help materials present phenomenological accounts of behavioural disorders, prescriptive advice, problem-solving approaches, and evidence of their effectiveness (Norcross, 2000). Briefly, these materials, which are more didactic and confined to a specific problem, offer decision-making strategies, information or solutions to certain problems. Hynes and Hynes-Berry (1986) indicated that “the language of nonfiction is meant to involve the intellect rather than to recreate an experience- even though the rhetoric of nonfiction does frequently include a definite emotional, persuasive element” (p.94). They also include specific procedures to reach the therapeutic goals and offer structured activities that expedite the interaction between client and counsellor. These activities can be assigned as homework between sessions, or as part of group therapy, or can be applied in individual therapy as well (Coleman & Ganong, 1988).

Nowadays, in large bookstores, there is often a sizable self-help section (see Appendix 2-3: List of self-help materials), covering such matters as personal growth,

enhancing self-image, improving interpersonal relationships, relaxation, weight-loss, mental health care, etc. Such books have even been among the top best-sellers. Undoubtedly, the above themes of self-help books can be implemented without the assistance of a counsellor. However, as for the remedy, it is better that it is endorsed by professionals. The traits of fiction and non-fictional materials are summarised in the following tables.

Table 2-2: Types of printed materials

	Fiction	Non-fiction: Self-help materials
Categories	<ul style="list-style-type: none"> • Imaginative/ inspirational materials • Heuristic/creative readings • Literature, novels, stories, fables, religious writing. 	<ul style="list-style-type: none"> • Informative materials • Didactic/instructive readings • Self-help books/manuals, do-it-yourself books, workbooks, mental hygiene books.
Key features	<ul style="list-style-type: none"> • Penetrates one's unconscious to make one more aware of self, tends to be psychodynamic oriented. • Provides an opportunity to identify & re-experience the same problems as story characters • Releases emotions/catharsis • Helps to develop insights & solutions 	<ul style="list-style-type: none"> • Focuses on cognitive processes • Teaches new strategies of problem solving

Goals	<ul style="list-style-type: none"> • Emphasis on self-awareness, introspection, and empowering one's ability of coping with stress. 	<ul style="list-style-type: none"> • Giving relevant information. • Modifying into a good adjustment.
Process	<ul style="list-style-type: none"> • Mostly using integrative approach • Read between or in sessions. • Discussed in sessions. • Followed by other intervention • Involvement in story situations with client's subjective thinking and emotions. 	<ul style="list-style-type: none"> • Mostly using adjunctive approach • Read between sessions (as homework assignment). • Discussed in sessions • As an adjunct to other psychotherapy.

Further, there are some issues that need to be addressed when employing self-help materials, as below:

• **Is it necessary for self-help materials to be recommended by therapist?**

Starker (1992) argued that the potential danger of the use of self-help books by medical patients has been too little investigated in the clinical or experimental literature. The advice contained in self-help books should be empirically proven, but some topics concerning personal or spiritual growth are difficult or impossible to be ratified objectively. Self-help books like textbooks offer required knowledge, and are useful for some minor problems. However, when confronted with a complex and troublesome situation, clients need professional recommendation to reduce the risk of taking the wrong advice. Likewise, people can look up their symptoms on medical web sites, then buy the medicine from a drug store when their illness is merely a minor problem;

whereas, in the case of a serious illness, even if one finds out the name of the drug, the pharmacist will not sell it. A doctor's prescription is needed to endorse the exactitude of medical treatment, followed up by monitoring and evaluation. The same thinking applies to the self-help approach.

Nowadays, there is a risk of forming false expectations of the effectiveness of self-help books, which is encouraged by some commercial advertisements. Self-help materials may be not regarded as reliable unless they are presented with clear specifications of procedures, self-assessment, and are recommended by an experienced therapist, to ensure positive outcomes. Otherwise, reading inappropriate books may cause clients to feel frustrated or devalued, to suffer self-blame, or even to have severe side effects.

- **Is it a necessity to require empirical support for self-help materials /manuals?**

Without empirical support, self-help materials may lead clients to be Pollyannas and have over-optimistic expectations. They may, as a result, later encounter “grim disillusionment” (Moore, 1991). These results could be more a loss than gain, and even cause unredeemable consequences. Another problem is that there is no absolute criterion for ranking reading materials, and “no sure-fire formula for distinguishing a mediocre work that is potentially effective from one that is entirely unviable” (Hynes & Hynes-Berry, 1986, p.76). Some self-help books that have not been validated empirically and are full of advice may cause such negative effects as self-blame if the

client fails to achieve the desired outcomes (Rosen, 1987). Rosen's criterion is a good rationale for self-help books (see Appendix:2-4: Rosen's criteria for the review of "do-it-yourself treatment" books), but there is still need for more diversified criteria to be established by a committee of a legitimate authority or a reliable professional organization, especially with the rapid proliferation of self-help materials available from publishers and internet resources.

2.5.2. Nonprinted materials: Audio-visual materials

With the vigorous development in publishing, multimedia, and digital devices, therapeutic materials need no longer be books alone. Instead, sound or visual images can be added to deepen impressions, induce interest, and intensify therapeutic effects. Examples include talking books, films, drama, music, internet, or computer-based materials which can be used as either fiction or self-help materials. Ellis (1993) stated that many clients are averse to reading, but enthusiastic to watch audiovisual materials which offer more vivid alternatives than written materials. Now, most professionals recognize that therapeutic adjunctive materials need not take only the form of reading, but that listening, watching, or acting are also popular. Furthermore, there are many award-winning films adapted from novels, literary masterpieces, or true life stories, which encourage reflection, provide food for thought, or help stimulate deep thought, which render bibliotherapy more diversified (see Appendix 2-5: Recommendable films for Bibliotherapy).

Zuckerman (2003) indicated, “There are power and informational asymmetries between the client and the professional, but this is changing because of the internet and other communication channels. Experts no longer have exclusive access to expertise” (p. 217). Besides, Newman (1999) indicated that using computers not only ensures privacy, but also increases engrossment in the therapeutic tasks for some clients. Thus, the ways of accessing information become more various and infinite, so that incorporating these powerful prolific electronic resources into therapy may become a new trend in future counselling.

2.5.3. Selection of materials

Newton (1969) said, “bibliotherapy is based on the belief that a person is affected by what he reads” (p.259). This is to say, if the material is not the right choice, for instance, clients could be adversely affected and led to adopt a pessimistic perspective on life as a result of the author’s influence, especially in the case of clients who are fragile or lost in their predicament. Materials need to be selected very carefully in accordance with clients’ needs, interests, reading levels, progress, and the nature of their problems. Likewise, Brown (1975) said, “We need more than the right books for the right person at the right time” (p. 334). Also, Kaplan (1994) indicated that reading poorly written novels may be worse than not reading anything at all. It is widely accepted that the selection of materials must be exact and professional. For example, it would be viewed as unethical for a counsellor to recommend books that he or she has

not read before. We must realize that the casual recommendation of a certain book is very risky and could be unhelpful for the clients. Fortunately, there are many challenging professional websites that provide very useful annotated bibliographies to help in matching the various needs of clients (see Appendix 2-6: The websites for selecting annotated bibliographies)

Regarding self-help materials, it is important to have an objective and reliable standard by which to evaluate whether materials are appropriate or not. Rosen (1981) proclaimed that the therapists who recommend books should previously analyse the empirical evidence, otherwise they are offering no more than personal suggestions that have nothing to do with proven effectiveness. Rosen's criteria provide a satisfying rationale for recommending self-help books, details in Appendix 2-4 (Adams & Pitre, 2000). For instance, *Feeling Good* (Burns, 1980; 1999) is a very good self-help book for cognitive bibliotherapy against depression (Scogin, Hamblin & Beutler, 1987; Scogin, Jamison & Gocheat, 1989; Bowman, Scogin & Lyrene, 1995; Smith, Floyd, Scogin & Jamison, 1997). It is continually being revised and updated. A Chinese edition was also published in 1987. This book contains a wealth of information and suggestions for coping with depression that meet all Rosen's criteria. This book teaches people that what they think may have an impact on how they feel, so it advocates changing one's way of thinking to be more positive, and especially challenges self-condemnation.

Furthermore, caution should be exercised with some topics such as drug use or

crime, since clients may learn undesirable techniques or information, such as how to make drugs or commit crime, from source books. Another matter that needs to be carefully considered is cross-cultural appropriateness, where the source and client represent, for example, different cultural beliefs, races, values, lifestyles, socio-cultural background, or a particular religious, ethnic, or geographic group, etc. Cultural factors should, therefore, be considered sensitively when selecting recommended resources.

2.6. The techniques of bibliotherapy

Bibliotherapy is the three-fold interaction of counsellor-book-client, which is not like traditional person-to-person therapy; instead, it adds a medium to facilitate in the counselling process. In this study, bibliotherapy is discussed with a focus on the counselling field. This section introduces the basic concepts.

2.6.1. Participants

Usually, experimental researchers call the people on whom they conduct research, “subjects”, whereas social survey researchers call them “respondents”, and qualitative researchers call them “participants”. All of the above names are grounded in their respective traditions. However, here the item “participants” is used throughout, in order to avoid confusion by different names, and also to prevent science being placed in a dominant position and creating distance between participants and researcher.

Bibliotherapy has been shown to be more effective when the participants are of average or above average reading ability (Zaccaria & Moses, 1968). It is not suitable for

participants with cognitive limitation and trouble with motivation. Other differentiating characteristics of participants' readiness are reading interests and preferences, age, maturity, educational background, gender, social class, type of job, types of life issues, ethnic type, mental and physical condition, religion, culture, etc. The same factors would also significantly influence the selection of materials for bibliotherapy. However, the participant's reading level is not a major problem anymore, because films, other multimedia or computer based programs could be used instead of books, and provide a wide range of choices of interest that make it much easier to match different participants' desires. It is worth mentioning that participant's interest in the selected materials is considered as the core factor, because it can help overcome other deficiencies if the participant has a high level of interest and strong drive.

2.6.2. Facilitators

The counsellor needs to possess the same characteristics as traditional counsellors, in order to establish a counselling relationship. These include trust rapport, respect, empathy, reliability, genuineness, acceptance, and understanding. Good time-management and ability to move the process forward are required as well.

Not every practitioner is qualified to be a counsellor in the bibliotherapeutic process; in addition to the above requirements, he/she needs to possess literary mastery and be proficient in selecting materials, have a genuine interest in cooperating with others, be able to empathize and not threaten or command (Alex, 1993). That is to say,

counsellors should be familiar with the reading materials recommended, and know how to conduct bibliotherapy skilfully as a therapeutic medium which parallels the problems confronted, and help clients to formulate strategies to deal with the problems. In sum, the major difference between bibliotherapy and traditional counselling is that bibliotherapeutic counsellors need to familiarize themselves with the different themes of reading materials, as well as help clients better understand and become aware of their problems, and also improve their ability to cope better in terms of behaviour.

Another difference is that “professional” counsellors are governed by a professional body which monitors and is responsible for the quality and effectiveness of counsellors abilities and training. Although librarians are proficient in guiding the client to the right reading materials, they cannot actually perform bibliotherapy because they cannot take responsibility for the counselling functions their members may undertake, as do other diverse groups which offer specialist reading guidance within their discipline.

Furthermore, in order to maintain professional quality, it is important to update the counsellor’s professional training. This could be done through continuing or vocational education. In Taiwan, although there is no specific bibliotherapy organisation, there are some themes and workshops about bibliotherapy in professional organisations such as the Chinese Guidance Association, the Mental Health Association in Taiwan, the Chinese Psychological Association, and PsychPark in Taiwan ([http: //](http://)

www.mental.idv.tw/global). They also periodically provide a variety of continuing education and practical training courses for licensed counsellors and trainee counsellors.

2.6.3. The process of bibliotherapy

Through identifying with the story character, clients would be induced to understand their own motivation, perceptions and sensations (Griffin, 1984). Then, clients can release emotional tension outside the body, to become calm and restore their mental equilibrium. Brown (1975) depicted that the most significant component of the bibliotherapeutic process is post-discussion, because it can detect and amend any problems caused by wrong choices of reading materials or misunderstanding by the clients. Heber (1991) also claimed that bibliotherapy should involve follow-up activities like discussion. Without this vital process, the therapy is not completed and equates to general reading, which lacks therapeutic utility. Thus, preferably, after clients' reading, interpretation, and reflection, the counsellor should pose some vital or enlightening questions with certain counselling techniques to help clients know themselves more deeply or explore important issues in their lives. Through this intervention, clients can also check mutually if there is any misunderstanding, share their perspectives, or generate new ideas by brainstorming.

Hynes and Hynes-Berry (1986) delineated that bibliotherapy is an interactive process in the triad of participant-literature-facilitator. The participant enters into a dialogue with the facilitator about his/her responses to the literature, which ferments

insights. The literature is usually deemed as the object of discussion, as a catalyst, rather than a tool. They described the process as having four elements. In the first, recognition, the counsellor helps the clients to express their experiences rather than understand the piece of the materials, i.e., the clients' personal feeling-responses are more significant than their grasp of the meaning of the reading materials. Clients recognize story ambiguities and find out the patterns of their habitual responses, then bring about a catharsis or release tension. The second element is examination: the counsellor checks clients' feelings and concepts which underlie their responses to the reading, or poses some questions to check out and reveal the deeper meanings in their minds. Thirdly, juxtaposition: clients juxtapose and compare feelings aroused by the literature with their own problems, then bring them to light through discussion. Finally, self-application: the therapist helps clients to ask themselves some questions to evaluate how their attitudes and behaviours are influenced by the new viewpoints, integrate new insights, then apply these to real life.

Sridhar and Vaughn (2000) proposed four steps of bibliotherapy as follows: (1) Getting ready: select appropriate books in accord with clients' problems, where the main story character resembles the client in behaviour. (2) Before reading: introduce the theme and characters of the book, and offer some prior knowledge. Then let clients compare their experiences with the story character or make some predictions. (3) During reading/immediately after reading: ask some questions to help summarize the

key points of the information and identify with the characters. (4) After reading: initiate discussion and follow-up activities. Referring to the above statements, the process must have at least the following fundamental phases:

1. **Diagnosis and plan:** engage with clients to find out their background including reading ability, needs, personality, and psychosomatic conditions. Then, analyse their main problematic issues and classify the type of problems. Finally choose an appropriate intervention to make a counselling plan.
2. **Rapprochement:** carry out warm up activity, build rapport and trust with clients, and introduce the therapeutic goals, process, and requirements.
3. **Recommend/introduce the material:** recommend appropriate materials according to clients' problems and needs, then offer prior knowledge or give directive guidance of the reading in order to motivate clients' interest.
4. **Reading:** provide the book with the reading guideline; either read together in sessions or assign as homework.
5. **Follow-up activities (i.e., integrative bibliotherapy):** follow by other intervention, counselling, or discussion. For example, when using fiction, which encourages clients to discuss by asking more "why", instead of "what", clients can be encouraged to write down their reflections then share their feelings about the story characters or plots, which are more important than remembering the details of the story; to discuss the strengths and weaknesses of the story character with whom the client has

identified; or to talk over the dilemma or distraught feelings in the story, then compare themselves with the story character. The therapist can ask clients if there are any alternatives for this story, and bring forth heuristic ideas. This can be done, for example, by group sharing of their perceptions, reflections, comparisons, and applications of the story. Then, attention can be directed back to clients' own problems, and counselling or artistic activities. For example, creative writing can be employed to provide a different ending to the story, or the client could compose a letter for a story character, or adapt a script, resolving the problems in a different way. Alternatively, the other type of bibliotherapy, "Adjunctive bibliotherapy", mostly adopts self-help materials and is deemed as an adjunct to other forms of psychotherapy, as mentioned in previous sections.

6. Assessment: evaluate the effects by questionnaire, checklist or some feedback activities, check if the outcome is effective to cope with the problems and stress. If the client fails, then go back to the stage of recommending/introducing the material; if successful, the goal is reached, and the client can keep reading as a good habit for personal growth.

2.6.3.1. Group dynamics and counselling skills in proceeding bibliotherapy

Strictly speaking, bibliotherapy needs to be conducted by a therapist or counsellor, who engages in activities such as discussion, diagnosis, monitor, catalysing, interaction, problem solving and evaluation. Group bibliotherapy takes advantages not only from

reading the materials but also from the dynamic interaction among group members. It provides the members with an opportunity to learn from others and share common experiences and feel they are not alone. It reduces anxiety, gives a sense of security and warmth, and creates a feeling of belongingness.

Adams and Pitre (2000) formulated two hypotheses of bibliotherapy: First, artisan counsellors rely more on using books as an adjunct than professional registered counsellors. Second, counsellors with larger caseloads are more likely to apply bibliotherapy than those with smaller caseloads. However, the outcomes of their investigation did not support either hypothesis. Indeed, they found that counsellors with more than ten years of counselling experience more often recommended books to their clients than less experienced counsellors. Actually, helping people by recommending reading is not an easy and superficial task, since the counsellor must be able to skilfully apply the materials to induce clients' inner feelings, thinking, motivations, and values underlying their problems, and to facilitate change to a more positive attitude.

Adler (1958) indicated that the ability of empathy is a prerequisite for the development of social interest. Reading can not only educate clients to explore their way of life, analyse their behavioural patterns, and understand themselves better, but also develop social interest by enhancing their respect and empathy for others. Bibliotherapy can also be of great value for children, especially to help those who are unable to verbalize explicitly their inner feelings. Through reading and discussion,

children can perceive- a fictional character's subtle feelings, identify with them and internalize their emotions unconsciously, become more aware of themselves, and finally integrate the new insights into their lifestyles or rectify their maladaptive behaviour.

Bibliotherapy can be a catalyst in group therapy. For example, reading materials can offer themes to effectively facilitate group dynamics and interaction. On the other hand, the group atmosphere of acceptance, support, trust and cohesiveness also helps expedite members' sharing, develop interpersonal awareness, help members gain insights into problems, generate different viewpoints, create new values, and stimulate personal growth by interaction with members.

2.6.3.2. Bibliotherapy has to be guided by a professional

Bibliotherapy can be applied with all persons, in all settings, for all purposes, but it cannot be applied indiscriminately by anyone. The most important requisite for it is to be utilized by professionals (Zaccaria & Moses, 1968). Bibliotherapy may raise some potential problems and risks in processing as Floyd (2003) pointed out: one is that it may offend clients who may think the counsellor does not want to work with them or that the counsellor supposes their problems are very simple, so they can get help from a book. The other is that some clients may not have been good at schoolwork when they were at school, and be afraid of carrying out evaluation that resembles academic work. Another is that some clients resist homework or suggestions assigned by the counsellor. Therefore, to avoid these negative influences, the experienced counsellor's involvement,

support, empathy, and dedication are needed. Undoubtedly, guidance or direction by a well-trained qualified counsellor is indispensable in bibliotherapy.

2.6.3.3. Bibliotherapy as indirect therapy is less threatening

Sclabassi (1973) described bibliotherapy as “allowing opportunity to discuss problems without initial embarrassment of explicit self-revelation” (p.72). To discuss impersonal issues can make the client feel more secure, if he/she is not ready for self-disclosure. Someone once said that the process of taking psychotherapy is just like being an onion, peeled and torn layer by layer. In contrast, bibliotherapy is an indirect therapy with less hurt and emotional breakdown, because the materials are impersonal, and clients can identify with the main character in a story, project their own problem in an impersonal manner, and reflect on coping with the story character’s parallel problems from a safe distance, which is less threatening than direct confrontation. Jones (2001) suggested that the counsellor can implicitly choose a therapeutic book to help clients in order to avoid pressure in verbalising or disclosing their problems, as the messages embodied in the text can be absorbed without clients’ awareness.

Moreover, bibliotherapy can also involve some self-directed activities instead of the counsellor’s direct activity, if the client rejects direction from others, i.e., in the case of clients with high defence or resistance (Beutler, 1991). Smith (1989) depicted that fictional works are safer topics of discussion, because clients can feel freer when talking indirectly about story characters, rather than directly about themselves. Such subliminal

and indirect learning can help to alleviate clients' anxiety, fears of self-closure, insecurity, and some defence mechanisms.

Bibliotherapy, which is an indirect approach to facilitate clients' participation, empower their potential, and diminish authoritative direction, is suited to most Chinese culture. Many Chinese people were educated to be reserved, obedient, and acquiescent, in contrast to Western people, who acquired democratic rights earlier. This tendency towards indirection stems from their emotional repression, not from innate rational insufficiency. In ancient times, China was politically totalitarian, dominated by the orthodoxy. It stressed the traditional cardinal ethic between the ruler and the ruled, even to the extent of sacrificing oneself in order to fulfil one's obligation and evidence faith. Zhuang Zi's fables were characterised by a highly literary imagination, rhetoric, and aesthetic power, which could help people be more confident to express their emotions, loosen obstinacy character, and overcome problems.

2.7. The interaction between the client and reading

Reading is a cognitive process through the static form of language, and also dynamic in that the reader has a silent dialogue with the text to stimulate many mental activities, or even give feedback to the author. The world of reading literature is like a small cosmos. Any possibility could be created by the reader. Robert Frost (1963) in the foreword of his "Selected Poems", said, "A poem begins in delight and ends in wisdom". He also said that in reading a poem "the initial delight is in the surprise of remembering

something I didn't know I knew" (p. 3). Reading can bring about great enjoyment for reading-oriented people. Indeed, some valuable readings can permeate into one's unconscious, stir awareness, and reveal something hidden. Crosse (1928) claimed that "literature is and has been through ages the great medium of thought transference. It is the mighty stronghold wherein are kept the gems of intellect" (p. 925). Reading materials are numerous and varied; if one has been affected deeply by a book, one has experienced realistically the power of the written word.

2.7.1. The dynamics of reading

Reading is a powerful way to gain knowledge, no matter whether in formal learning derived from school/institution, or informal learning through hobbies, experiential learning, and learning purely to satisfy personal inclinations. This is especially important in terms of practical reality based on individual concerns because of its dynamic and spontaneous relationship with what the individual really values or desires.

Alston (1962), a psychoanalyst, pointed out that "The written word, which one can take or leave, is not as intensive as the spoken word, nor is the written word likely to have been as associated with demands and prohibitions and other anxiety-provoking experiences as the spoken word. Accordingly, many people can approach a book with minimal defensiveness and maximal accessibility. For many people, the written word has an exceptional authority and authenticity" (pp. 166-167). Ideas presented in reading

are less threatening and so more freely accepted. Although readers might judge and dismiss certain ideas or behaviours in literature at first, they may come to accept them later (Jackson, 2001). Literature can help widen clients' horizons, facilitate understanding of the outside world, and reveal the realities of life.

Holland (1975), a psychoanalyst and literary critic, stated that reading is an active and dynamic process. He proposed four principles for this dynamic process. First, style seeks itself: readers integrate the reading materials into their lifestyle if they respond positively. That is, they will not integrate them into their life unless they identify with or are fond of the materials. Secondly, defences must be matched: readers usually like characters in a story who use the same defence mechanism as they themselves do. Thirdly, fantasy projects fantasy: readers may project their own fantasies onto the story. Lastly, character transforms characteristically: readers recast the character into their own internal language, character, fantasy, etc. Likewise, reading can also offer a chance to share vicariously the experiences of story characters (Calhoun, 1987). It gives people a chance to see both their problems and story issues at a distance in order to get a more objective view of their situation (Jones, 2001). Temporarily stepping outside a conflict situation can make it much easier to grasp the whole picture and perceive the objective reality. In this dynamic process, vicarious experience at a certain distance can also help readers achieve catharsis, as they can release negative emotion without the risk of venting it on others. Clients not only feel secure, satisfied, and accepted, but also their

potential ability and creativity are empowered.

In this study, fiction is employed as reading materials, so the following discussion will focus on this aspect. Bibliotherapy is seen as passing through several stages, of which Shrodes (1949), who originally defined these stages, identified four: identification, projection, abreaction and catharsis, and insight. Then, Russell and Shrodes (1950) produced a revised model in three stages: (1) Identification: Literary works must include some problem related to the client's to enable them to identify with the character facing similar suffering and struggle. This could help to reduce the client's anxiety, feeling of isolation and exclusion from the normal majority. (2) Catharsis: apart from sharing within the group and experiencing other's experiences, clients also discuss their dilemmas. This re-experience helps them to vent their own feelings and suffering. (3) Insight: through bibliotherapy, clients not only become more aware of the causation behind their problems, but can also create new values or alternative solutions . Similarly, J. T. Pardeck and J. A. Pardeck (1993) indicated the following stages that the counsellor may facilitate in bibliotherapy: (1) Identification & projection: point out the similarities between the client's and the character's problem and help the client interpret the story character's motives and meanings. (2) Abreaction & catharsis: monitor the details of the client's reactions, emotional expression and release. (3) Insight & integration: help the client to recognize and find new solutions for the problems he/she is confronting. Furthermore, clients can also take a figure in the story with whom they identify as a

model, if they imitate and internalize the character's values into their real life. This socialization process would help their social adjustment and sense of psychological belongingness. Such an influence caused by interaction between clients and story character seems to be a kind of self-therapy, but it is better for it to be followed by discussion and counselling to enable clients to derive the maximum benefit from bibliotherapy. Summarising the above typologies, the psychodynamic stages of fiction reading in bibliotherapy can be shown as follows:

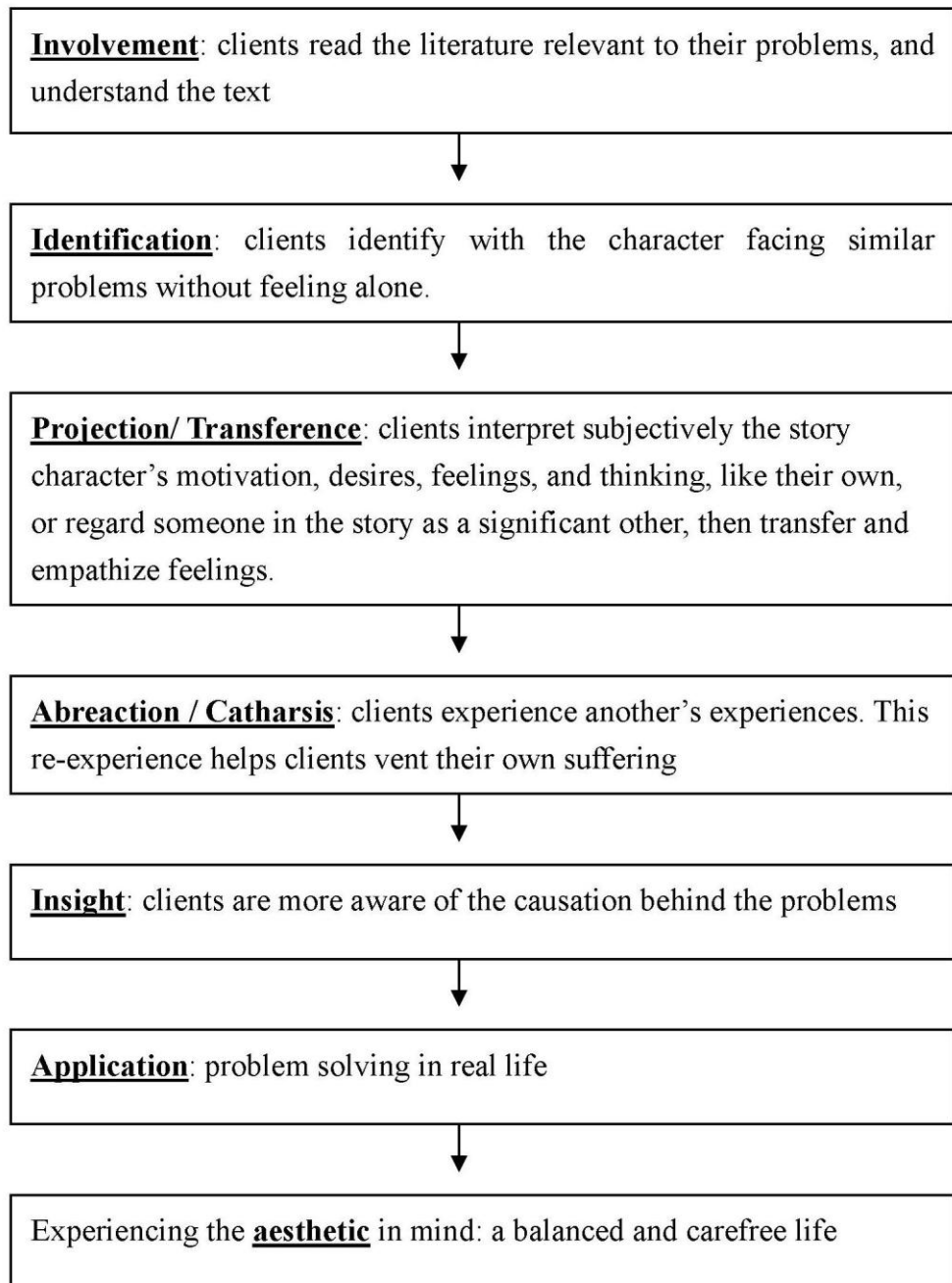


Figure 2-2: The psychodynamic stages of reading fiction in bibliotherapy

2.7.2. The relationship between reader and text

How are works of literature created? How do readings interact with the reader?

How can text be analysed and interpreted? In the 19th century, historical criticism or biographical criticism were popular approaches for analysing literature, which were

author-centred. At that time, literary critics considered it valuable to interpret the text based on decoding the author's original message, in light of the author's personal development and historical background. During 1910-1957, a new approach to critical theory emerged which challenged textual criticism and traditional author-centred critique, instead favouring a text-centred approach. According to this view, once a text is created, it is independent. All meaning is contained in the text and can be elicited by objective criticism: a work is an object. This approach is interested in such devices as metaphor, irony and paradox, because these embody tremendous literary extension and imagination (Hartman, 1980).

Louise Rosenblatt (1976; 1995), who was an influential scholar of reader-response theory against the new critical theory, indicated that literature should not be viewed in isolation. Rather, analysis should explore the transaction between the works and reader, from which the meaning of literature is derived. There is no fixed meaning in the text, and there is no single valid interpretation. There can be many possibilities depending on clients' perspectives. Later on, Iser (1980) argued that focusing only on the role of the reader may result in problems which could cause gaps, or blanks between the reader and text in which the author is present. He applied the phenomenological approach to explain the interaction between the author (at the artistic pole) and the reader (at the aesthetic pole). The author creates literature which evokes a sympathetic response from readers, makes them sublimate their spirit and brings about aesthetic in reading. This

also allows the reader to process meaning. However, this must be done in accordance with what has been said and implied, i.e., interpretation cannot be separated from the implications hidden within the author's creativity.

Nowadays, how are readers thought to communicate with the text? Current discussion goes beyond theories about the triangular relationship of author, reader and text, to include culture, circumstances, ethnicity, post-colonialism, race, gender, class, geography, sexual orientation, etc. All these approaches and elements discussed above can give us valuable references and different perspectives for thinking about a text and also some clues for analysing the impact of reading on the client.

Due to rapid modern technical development, books are no longer the most powerful medium for delivering thoughts and feelings; multi-media can be usefully applied to discuss life issues in the classroom. Calling the use of multi-media "bibliotherapy" utilizes a broad concept of reading. In this study, cartoons and films were utilised simultaneously in addition to books to strengthen students' understanding and impression. Undoubtedly, multimedia with lifelike expressions would facilitate getting into the plots quickly, increasing the learning motivation, and bringing self-reflection or unconscious emotional involvement.

2.7.3. Ways of interpreting the reading

Looking at the historical development of psychology, it can be seen that it stemmed from philosophy. For example, John Lock (1632-1704), an empiricist, thought that

individual experiences come from sensation or introspection. David Hume (1711-1776) adopted the term perception to explain how knowledge is constructed. However, Immanuel Kant (1724-1804), an idealist, argued that the experiences of perception are disordered without a rationale to organize them. Wilhelm Wundt (1832-1920) established the first psychological laboratory in 1879, to explore individual sensation and perception by introspection. This experimental psychology became an independent field, apart from philosophy. However, both are concerned with the way we know the outside world, grasp messages, and interpret the meanings connected to our life.

How do we interpret text? Is it necessary to be objective? or is it acceptable to be more individualized and subjective? Nietzsche (1844-1900) indicated that no absolute truth but only interpretation due to the world of Becoming (flux). “All truth are fictions; all such fictions are interpretations; and all interpretations are perspectives” (Copleston, 1963, p.410). People have certain subjective *a priori* values, then develop their beliefs, and interpret phenomena accordingly. In other words, firstly people are involved in a situation and related it to their existence. They describe things according to their subjective values and make selective interpretations depending on their perspective. There is no such thing as an objective, true, value judgement (Oaklander, 1992). This view is in contrast to that of the rationalists, who emphasize that interpretation should be neutral, and be based only on the reader’s beliefs and disregard the influences of values. Nietzsche’s viewpoint, which allows interpretation to preserve individual

subjective perspectives and values, influenced the later post-modernism.

Husserl's (1859-1938) phenomenology, the new descriptive method, emphasized the purely psychical in self-experience and developed into a pure psychology. The idea of a phenomenological psychology is to describe subjectively and reveal pure self-experience without presupposition. This is pure phenomenological reduction (Encyclopaedia Britannica, 1929). This is different from investigation by using a scientific/natural attitude which starts from a presupposition and follows certain steps to test whether the assumptions are true or false. However, this phenomenology might cause some prejudices in predicting, or explaining clients' hidden psychological stress, or cause some other possibilities to be missed. Phenomenology aims to preceive and describe things authentically without any scientific premise and presupposition, then analyse the descriptions objectively based on theories, to find out the common core and essence. This was applied to person-centred counselling to help counsellors empathize authentically with clients' pure perceptions. The counsellor takes a neutral attitude without any presupposition, and faithfully reflects the client's appearance, attitude, and character. Rogers (1995) delineated the "phenomenal field" as constructed by individual unique perception and subjective experiences towards the world. He thought that doing research is an objective task, but taking therapy is the subjective experience of letting go. Thus, clients are encouraged to express their subjective experiences and go forth toward self-actualization.

Hirsch (1967) emphasized understanding the “verbal meaning” of the author in text; but not “significance” grasped by readers subjectively. This was a departure from the trend since the Enlightenment, whereby people were trained to discard their prejudice because the lack of objective reality was regarded as completely negative and biased, and rationality was the most emphasized dimension in life. However, Schleiermacher (1985) argued that to understand the text is to “re-experience” the author’s feeling and thinking, and the emphasis should not be only on analysing the words of the text. Explicitly, Fish (1980) claimed, “the reader’s activities are at the centre of attention where they are regarded not as leading to meaning but as having meaning” (p. 158). In other words, the meaning of literature does not inhere in the text but in the reader. Once literature is created, it is independent from the author. Fish also applied the concept of a hermeneutical circle that allows readers to use their pre-understanding to restructure the meaning of the text, and encouraged clients to reveal their emotions and interpret text in line with their perspectives. The more authentic the clients response, the more effective the outcome is. According to this emphasis on the reader’s role as a maker and interpreter, the author’s original thoughts might be restructured by various meanings from different readers, but every version is unique and productive. From this perspective, through reading, our mind and horizon is like a puzzle to be pieced together and completed. No matter what interpretation the reader makes, it embodies a strong individualization depending on the individual’s developmental background and

personality. This is why bibliotherapy can help counsellors understand more about the client and work through their problems.

Gadamer (1976) claimed that it is not necessary for readers to forget themselves, and totally go into the author's world to interpret the text with a psychological empathy. Instead, readers can interpret the text using their own perspectives, and even prejudices. Thus, he argued that "prejudice", i.e., subjective standpoints, is not negative, contrary to the stereotypical negative concept of prejudice; rather, it is a prerequisite of understanding and can help pre-understanding. One's subjectivity is allowed to be present because this contains individual authentic responses, feelings, and characteristics without absolute right or wrong. He thought that the meanings of literary works are generated in the dialogue between text and interpreter, i.e., meaning then emerges through the interpreter's subjective reflection and introspection while narrating and interpreting the text. He indicated, "Prejudices are biases of our openness to the world. They are simply conditions whereby we experience something-whereby what we encounter says something to us" (p. 115). It is impossible for each reader to interpret without any prejudice or subjective interpretation, which is the pathway to go into this open world. Readers can own their subjective interpretation, and can even invent new contemporary meanings, meanwhile remaining open minded in dialogue with others. Gadamer also redefined "classic literature", to refer not only to ancient literature, but also to that which has value to be interpreted by people in different times. Thereby,

reading and interpreting classic literature is a valuable choice to promote self-awareness and reflection, stimulate deep thought, gain insight and inspire wisdom, which can be applied to solve problems in real life.

In the late 20th century, focus on the literary/narrative text, hermeneutics, began from an epistemological standpoint to interpret the subject's behaviour, then gradually evolved to ontological hermeneutics, which originated from Heidegger and was developed by Gadamer. Heidegger (2005) thought “ that there is some way in which *Dasein* understands itself in its *Being*, and that to some degree it does so explicitly. It is peculiar to this entity that with and through its *Being*, this *Being* is disclosed to it. Understanding of *Being* is itself a definite characteristic of *Dasein's Being*” (p. 196). “*Being*” means the existence of all living thing, all beings, i.e., the whole, universal existence, e.g., culture, traditions, film, text, etc. “*Dasein*”, “there-being” in German, meaning respective or specific existence, e.g., contemporary culture, individual perception, the character in a film. Human being, however, is the most special because only people of all species, can ask questions. Heidegger indicated that human existence (*Being*) can be understood through exploring the meaning of each personal existence (*Dasein*), i.e., understanding *Being* itself helps make *Dasein* more intelligible. Similarly, people also can understand *Dasein* itself by grasping the meaning of *Being*; also, they can extend and continue *Being* itself through understanding the respective *Dasein*. In this virtuous circle, called a “hermeneutical circle”, readers revise or increase meanings

after each reading, and this interaction between the reader (subject) and the text (object) can be repeated in an infinite circle as needed. Thus, this way of interpreting the text would be extensive and rich. Ontological hermeneutics recognizes that readers' essence of life and ways of existence are reflected when they interpret a text. For example, when adults interpret the fantasy, *Alice in Wonderland*, they might have different views from children, because their cognition and life have changed and developed. Through continuous revision and extension of interpretation, clients are prompted to project and interpret the inner textual meaning, which are parts of clients' experiences, and this process aids growth and renders life meaningful. Lastly, the counsellor should be cautious and sensitive; if some clients' interpretations tend towards negative perspectives, which would be a good time for deep exploration of important underlying messages hidden, or to help clients complete their life tasks.

2.7.3.1. Freedom to be oneself is the key to dealing with the external world

Rogers (1961) listed the traits of "a fully functioning person" as follows: (1) an openness to one's experience; (2) enjoying existential living; (3) trust in oneself; (4) a sense of freedom; (5) creativity. Of the above indicators, freedom to be oneself seems to be the core value. Without free will, the soul would be imprisoned and life would become insipid and passive. Generally, people enjoy sharing with others if they are respected and free.

However, this raises the question, what is "freedom"? This is the decisive factor to

open one's mind. However, many people think that freedom comes from outside possessions, i.e., once people have wealth and power, then they think they are able to control everything. These who espouse such a view regard being beyond outside control as possessing great freedom. However, is this really free? In Zhuang Zi's concepts, real freedom does not depend on outward gains, but is rooted in the intrinsic spirit, and does not fear to be true to the self. However, especially in a capitalist society, everything tends to be mechanized and merchandized. Spiritual richness and simple contentment seem to be undervalued.

The existentialist philosopher Jean-Paul Sartre (1977) advocated pursuit of absolute freedom, in which people must have absolute unconditional action and free choice. His thoughts are based on the initiative of personal will and stand against fatalism. Freedom is acquired by fighting for it and active action. People can freely talk, choose and decide in a way that is not restricted by objective social expectations and common values. One can actively create for oneself value and freedom. Sartre believed that "existence precedes essence", which means people exist first, then create their identity. However, the most elevated state in Zhuang Zi, "achievement of utmost humanity", is blending with Nature (ch. 2). Thus, there is no difference between existence and essence. This is a kind of ideo-materialism, or even goes beyond the boundary between subjects and objects. Also, Daoism suggested governing naturally without disturbing the civilians too much, and letting things develop according to their

own course. This could be said to be the first expression of Anarchism in the world (Rothbard, 1990). Zhuang Zi's definition of freedom tends to be to transcend worldly disturbance, pursue individual freedom, and obtain spiritual enjoyment.

Both Zhuang Zi and existentialists attached great importance to individual freedom and life meaning, but there are still some differences between them in the understanding and practice of freedom. However, these concepts can help us to be more aware of the relationship between the self and outward world. The contrast between Zhuang Zi and Sartre is summarised below (Liu, 1984):

Table 2-3: The contrast between Zhuang Zi and Sartre

	Zhuang Zi	Jean-Paul Sartre
Time	369-286 B.C.	1905-1980
Background	The Warring States in China	World War I & II
Main concepts	<ul style="list-style-type: none"> • Anti-traditional philosophy: opposed contemporaneous mainstream Confucianism. • Rejected the position of prime minister from King Qi Wei • Rejected pursuit of fame and fortune. • Provided another perspective on living in troubled times, that is, to preserve life value 	<ul style="list-style-type: none"> • Anti-traditional philosophy: against the view that one's existence can be measured by objective rational analysis or scientific approach; instead, applied phenomenology with subjectively intuitive experience to recognize the essence of existence. • Anti-social: antagonistic and protested against authority

	and remain spiritually free	<ul style="list-style-type: none"> • Refused to accept the Nobel Literature Reward
The core concepts of freedom	<ul style="list-style-type: none"> • People need not be restricted by the material world, but should learn to transcend it. • Without demands, greed and prejudice, peoples' minds would be set free, and accommodation reached with Nature. 	<ul style="list-style-type: none"> • He is not an observer or theorist, but a practitioner who is actively involved and fights for freedom. Freedom means having the freedom of choice and decision, then putting it into action. • Anti-fatalism

2.7.3.2. The life perspective plays a potential role during interaction with the reading

What do we pursue in life? How do we view this world? How can we possess happiness? The ancient Greek philosopher Epicurus (341-271 B.C.) thought there were three kinds of desires in life: one kind is natural and necessary; the second is natural but unnecessary; while the third is not natural and also unnecessary. His directive was not to surrender oneself to unnecessary desires, but to pursue natural desires that would be the source of pleasure. He advocated abstaining from bodily desires, because sensory enjoyment is temporary and covetous. Meanwhile, the pleasure of gaining something is marred by fear of losing it. Thus, he advocated a simple and plain life in order to maintain emotional equilibrium. The Epicurean school thought there are two kinds of pleasure: one is when the desires are satisfied; the other is when one is not restricted by

outward forces (Copleston, 1963). The former belongs to material pleasure; the latter belongs to spiritual pleasure and tranquility, which is similar to Zhuang Zi's spiritual enjoyment.

The ancient Greek philosopher Solon (6th B.C.- 5th B.C.) was the first man to explore "eudaimonia" (happiness in Greek). He gave a good description of the happy man as one "who was moderately supplied with the gifts of fortune, but had done the noblest deeds, and lived temperately". He defined the practical life as happiness in a lower sense (Aristotle, 1893, book X, ch. 8). That is to say, Solon advocated pursuit of eudaimonia, i.e., eudaemonism, and justice by repressing one's desires and following the moral path. What definition can be given for happiness? Generally, philosophers and religious thinkers often define happiness as living a good life, or virtue in ethics rather than simply an emotion or a state. For example, the 13th century philosopher-theologian Thomas Aquinas (2000) indicated that the ultimate end of human existence in Catholicism consists in "felicity" (the Latin equivalent to the Greek "eudaimonia"), or "blessed happiness" as a Beatific Vision of God's essence. Happiness was also regarded as an activity rather than an emotion by Aristotle (2003). He defined "happiness" as the practice of virtue through one's reason. From a psychological perspective, the definition of happiness is a state of well-being and contentment; an emotion of pleasurable or satisfying experience (<http://www.merriam-webster.com/dictionary/happiness>). Commonly, people who strive to fulfil their dreams would also achieve a feeling of

well-being and emotion of happiness.

How one views this world is a decisive factor in one's feeling. The ancient Greek philosopher Epictetus (55~135 A.D.) said that people are not disturbed by a thing itself, but disturbed by the way they see it. Generally speaking, optimistic people tend to view things in a positive way, in which the potential opportunities often draw their attention, even while confronting problems. However, pessimistic people often feel strong threats behind problems, and interpret things on the dark side, even as conspiracies against them personally. On the other hand, peoples' moods can also be affected by their vicarious experiences received via books and movies. These may be more effective by being indirect through bibliotherapy, e.g., not directly challenging a negative life perspective. In parallel, the readers would feel more positive and stronger within themselves if the reading context embraced a positive perspective in which a powerful influence can work upon others. Thus, it could happen that readers might construct a new perspective out of their dreams through being stimulated by an author's life vision during the process of reading.

2.7.3.3. Philosophical reflection can be an effective way to clarify language and concepts

Wittgenstein (1963) pointed out that philosophy serves as therapy, i.e., treatment of an illness, in the activity of clarifying the language; it discovers the connections between words and clear representation. Our perspective on self and world can be

retrieved from the above comprehensive description; organizing words is the same as organizing thinking. Peter Koestenbaum thought that most psychological disorders are caused more by philosophical quandaries than by psychotic disease (Raabe, 2001). There are various cognitive fallacies that confound the mind, for example, pre-judgement, selective abstraction, arbitrary inference, polarized thinking, etc. Philosophy has been applied to solve psychological problems since the ancient Greek era. However, Immanuel Kant (1724-1804) transformed philosophy into an inclination to pure speculation and abstract justification, so that philosophy was gradually distanced from solving daily life problems.

The French mathematician and philosopher Blaise Pascal (1623-1662) said, “Man is but a reed, the most feeble thing in nature, but he is a thinking reed.” Against the immensity of the universe, our existence is insignificant, but it is commendable that we are curious to understand the mind and behaviour of ourselves and others (Blaise, 2005). Thinking and reflection with philosophical perspectives should be a feasible way to create deep and systematic understanding of the self and the world.

2.7.4. Projection and transference in the process of reading

Freud (1976) thought there are two ways to deal with external reality. One is to confront problems realistically. The other is to use fictitious ways like camouflage. Clients could reveal and release their repression through self-defence mechanisms, daydreaming, projection onto others, or creating literary works. He viewed literature as

disclosing the libido and motivation, presenting a fantasy of substituted satisfaction to compensate for frustrated desires or instincts.

At the time of conceiving *Dasein*, Heidegger (2005) said that “meaning is the upon-which of a projection in terms of which something becomes intelligible as something; it gets its structure from a fore-having, a fore-sight and a fore-conception” (p.193). My past is part of me, and also can be my future potential. Our existence is influenced by the past, and can also have an impact on the future. Past-present-future are regarded as a continuum and a unity which can not be separated. Time is not objective and abstractive but is a subjective conception of the course of experiencing one’s life. Thus, the production and interpretation of meaning is like a projection from our past experiences, which is the foundation of constructing our present life. Thus, counsellors can help clients to perceive and interpret their projections to decode some difficult issues in their past, or even help rewrite their life scripts.

Sartre (1986) posed the question, why do people write? In his view, the primary reason is for freedom. Through fantasy, reading, or writing, people can release their innate limitations and fears. Also, clients might regard a certain story character as their significant other in life, then transfer their feelings and empathy onto the story character unconsciously through reading fiction, so as to accomplish wishes or release negative emotion.

Not every reader can project/transfer him/herself into a story, or needs

bibliotherapy. General reading can be done for pleasure, curiosity, or because one is attracted by a work's reputation. How can a distinction be made between bibliotherapy and general reading? In fact, bibliotherapy is for readers who seek professional help to relieve their emotional disturbance, or to assist with problem-solving, or personal growth. These readers are able to project/transfer themselves into the reading because their strong motivations and needs make them immerse themselves actively and generate insights from the story situation. As distinct from readers with the above demands, others' reading will be classified as general reading.

2.7.5. The aesthetics of reading

Bosanquet (1968) indicated that aesthetics and art are concerned with both body and mind. Thus, aesthetic experience is not a kind of imitation or representation. The reader must exercise his/her imagination to have some psychological interaction with literary works, such as being touched, experiencing catharsis, gaining insights, or sublimation. Sometimes, an aesthetic experience is more expressive than a real one, as it does not merely represent faithfully the outlook of object itself, but uses some medium to embody subtle, exquisite, profuse descriptions, to create a profound impression which resonates with the individual's mind.

On the other hand, aesthetic expression is different from venting one's emotions, and of a higher level. From an artistic perspective, to express something in one's mind needs a medium to reveal deep, abstract feelings and symbolic meanings, whereas

venting one's spleen on somebody is just a reflective act of letting emotions out (Dewey, 1958). Besides, when we read, aesthetics is a psychological activity, that can evoke feelings of pleasure by resonating, or catharsis. As Aristotle argued in his *Poetics* (late 4th B.C.), spectators are purged of their own emotions by participating vicariously in the drama, and this catharsis can reach the realm of aesthetics. Aesthetics is pure appreciation, which may bring satisfaction in mind, spiritual pleasure, equilibrium, sublimation, and tacit understanding, without any material exchange between subject and object.

Rosenblatt (1978) classified reading into two types: One is "aesthetic reading", which applies to reading literature; the other is for information getting, called "efferent reading". In aesthetic reading, the reader is attracted to and immerses him/herself in the story situation, and experiences the joy or suffering of the story characters, then recalls relevant memories. However, if the reader lacks motivation or is worried, then he or she would shut out certain responses, and avoid becoming deeply involved in literature. Indeed, the motive for reading is an important factor, and different goals evoke different drives. Hunt and Vipond (1985) classified two types of reading drive. One is "informative-driven", the purpose of which is for gaining knowledge. The other is "story-driven", which is for pleasure or catharsis. What the experience of aesthetics is, depends on how great is the psychological distance between the author's creative world and the reader's experiences. If they overlap, this means readers would project more

onto the reading; conversely, if there is no interaction, which means the reading is not suitable for the reader, and should be changed for a more appropriate one. Briefly, reading can be a feasible way to dispel mental tension and experience aesthetics in the mind, depending on the professional intervention and selection of the appropriate readings.

2.8. The value of bibliotherapy

Cornett and Cornett (1980) indicated, “ If you have ever felt warm, weepy, or renewed after reading a book, then you have experienced a form of bibliotherapy” (p.7). Apart from the pleasure and knowledge gained from reading, however, the important benefit is the therapeutic effects on the clients in the psychological interaction between the reader and text. The details are discussed in the following sections.

2.8.1. The benefits of bibliotherapy

Menninger (1937) was the first to depict the benefits of bibliotherapy, which are at least as follows. First, identification: Clients identify with the story characters who have similar problems and feel they are not alone. Thereby, they can abreact their emotions and achieve compensation. Secondly, stimulation: Clients would be prompted to compare with and learn from the characters, in values or ways of thinking, then change their attitudes. Additionally, through discussing the story, clients can be stimulated to verbalize their problems without shame or guilt. Thirdly, narcissistic gratification: narcissism, like a placebo, could provide temporary comfort to people while feel

emotionally fragile. Afterwards, it is still necessary to come back to the client's own problem and help him or her to cope authentically. Similarly, Gladding (1992) pointed out the various advantages of using literature in counselling as follows: (1) clients can significantly discover themselves through reading literature; (2) they can abreact some emotions, then explore alternative solutions to present problems; (3) they recognize their problems are universal, shared by other people; (4) they are helped to learn more positive and constructive approaches for dealing with problems.

Bibliotherapy stems from the concept that reading could shape an individual's attitude, behaviour and personality, and alter his/her values. All these changes are regarded as predictable. Clients are reoriented and re-educated through sharing books that present alternative ideas, and new modes of behaviour (Jackson 2001). J. A. Pardeck and J. T. Pardeck (1985) also stated that bibliotherapy can be applied as a tool to release emotional problems. For example, if the story character defeats evil or overcomes all obstacles, and finally achieves a good outcome, this could encourage people who have been in a similar situation or faced the same impulses. Another perspective is derived from Berg, Devlin and Gedaly-Duff (1980) who delineated bibliotherapy as applying literature to improve clients' healthy adaptation by helping them to express themselves, instead of getting bogged down in rigid thinking, or being stuck over an emotional block. Bibliotherapy aims to help clients to amend maladaptive beliefs, improve positive self-identity, or develop self-esteem. For this reason it is

necessary to make sure the content implies an active and positive perspective on life and contains profound reflection.

From a very early period, Bryan (1939) classified the goals of bibliotherapy as follows: to show the client he/she is not the first to have such problems; to show that it is possible to have more than one solution to problems; to help clients to understand others' motivations in a particular situation; to show the values of encountering the problems; and to encourage clients to face their situation realistically. It also can lower clients' defences (Zuniga, 1992). Accessing bibliotherapy renders clients more able to take off their masks, makes them see they are not alone with their depression, and helps them authentically face other people. Once clients are true to be themselves, the therapeutic effectiveness has emerged.

Bibliotherapy is just like walking in another's shoes, it provides the chance to experience others' lifestyle (Kramer, 1999). Thus, by learning from believable fictional characters, clients can grasp the reality of the outside world and enhance social adjustment. For example, children learn by imitation how to deal with others; they can learn to empathise, learn morals, and see how to take responsibility from story-telling or picture books. When they grow up, they start to read various literature, including history, autobiography, romance and adventure. These readings embody a psycho-educational function that could be beneficial in their later life.

Literature has been found to be a tool to help cope with stress or conflicts (Pardeck,

1994a; Newton, 1995). Using bibliotherapy can also help people to learn strategies for dealing with potential problems and reducing unwanted stress (Gladding & Gladding, 1991). It also can improve self-esteem, change behaviour, or alleviate stress (Sridhar & Vaughn, 2000). No matter where stress comes from, it can be reduced by the way we think. Appropriate reading with some positive views could challenge clients' thinking and attitude toward confronting stress

Bailey (1959) said, "Reading that is used to help solve or to prevent problems has been called therapeutic reading, bibliotherapy, and biblioprohylaxis" (p.515). Bibliotherapy is defined as the way of using books to help people in problem solving (Lehr, 1981; Cohen 1987; Aiex, 1993; Sridhar & Vaughn, 2000). As mentioned before, in Webster's Dictionary, it is defined as "guidance in the solution of personal problems through directed reading". Similarly, Riordan and Wilson (1989) portrayed bibliotherapy as "the guided reading of written materials in gaining understanding or solving problems relevant to a person's therapeutic needs" (p.506). Fictional resources can also help clients to be aware of the dynamics of problems. For example, a client may be unable to conceptualize what has caused his/her problems, or may be stuck over complicated or ambiguous life issues, perhaps because their prior knowledge or personal experiences are not conducive to face this dilemma. Through experiencing identification with a story character who has successfully overcome a similar situation, clients can be encouraged to develop new alternative approaches to their problems.

Edwards (1972) stated that “when we read fiction or drama, we perceive in accordance with our needs, goals, defences, and values. The reader abstracts only what he is able to perceive and organize. Hence, the student may interject meaning that will satisfy his needs and reject meaning that is threatening to his ego” (p.215), In other words, clients select what they identify with and abandon what they reject, so the benefit of bibliotherapy depends on selection of materials acceptable to the client. Fortunately, the publishing industry is expanding and flourishing, especially in the 21st century, and publishes various types of books, talking books, or multimedia, which assists bibliotherapy to offer an extensive choice of the materials, and match any themes with clients’ needs. This is one of the reasons why bibliotherapy still continues to be used. Besides, people sometimes do not want to confess their weakness or errors, as they wish to avoid losing face. Also, it is difficult, sometimes, for people to be self-aware. They have blind spots, just as people cannot see their back and need a mirror to reflect it. Reading and discussing another’s story, which presents life issues similar to the client’s, can help prompt clients go into their own problems without embarrassment, concealment, or denial.

In sum, various benefits can be derived from bibliotherapy, depending upon what materials are chosen and how they are used. Synthesising the above viewpoints, the benefits can be classified into four aspects, as below:

1. Self-identification:

- Improve ego strengths and reduce self-reliance.
- Prompt client to be aware of his/her problem, then induce his/her motivation of readjustment.
- Disclose the true self, enlighten self-perceptions, self-understanding, and insights.
- Create new values, and goodness in the mind, foster positive self-concept and attitude.
- Improve personal growth, self-esteem, self-efficacy and self-realization.
- Cultivate the mind, shape the disposition, and develop humane and aesthetic interests.

2. Emotion abreaction/catharsis:

- Divert the mind from suffering, such as by offering clients something to think, laugh, or dream about.
- Allow clients to escape, release or vent their repressed emotions through reading literature.
- Indirectly satisfy client's repressed emotions through reading fiction.
- Offer greater freedom and independence in interacting with books than with people.
- Help clients discuss problems more freely.
- Provide stimuli to reveal repressive emotions.
- Develop mental tranquility and emotional maturity.

- Encourage clients to change attitudes, amend maladaptive behaviours and learn new models.
- Prevent psychological disturbances and improve mental hygiene.

3. Social adjustment:

- Lower employment of the self-defence mechanism.
- Show the client that he/she is not alone in experiencing such a problem.
- Encourage the client to pay more attention to outside the self, see the world in a wider view.
- Recreate and cultivate social interests.
- Demonstrate how others encounter anxiety, frustration, and hopes.
- Enhance communication skills and interpersonal relationships.

4. Stress coping:

- Empower client to think, feel and act.
- Convey alternative ways of thinking and experiences about similar problems.
- Allow clients to confront their own stress from a safe distance through reading a story in which echoes their life.
- Stimulate discussion on problems and verbalization of inner feelings.
- Help in coping with stress bravely and realistically.
- Offer new strategies to cope with stress by collaboration with others.

Clients can gain great benefits through their responses to high quality literature, or

even other gains from outside the context of bibliotherapy (White, 1989). Quality literature represents a treasury of wisdom, and bibliotherapy is one of most effective passageways to seek out and polish these gems.

2.8.2. The applications of bibliotherapy

The effectiveness of bibliotherapy is represented in a variety of applications. Baker (1987) found that “ Bibliotherapy is often used in social groups and group therapy and is reported to be effective with people of all ages, with people in institutions as well as outpatients, and with healthy people who wish to share literature as a means of personal growth and development” (p.15). There are some applications from research findings to prove that bibliotherapy is an effective intervention, as shown in the following descriptions.

As regards youth, Edwards and Simpson (1986) found that bibliotherapy is effective in solving problems among teenagers. Pardeck and Pardeck (1993) also pointed out that reading selected materials can help adolescents to gain insight and prepare them to confront issues that they will encounter in their later life. Moreover, some self-help books have been found to be influential in treatment of many kinds of problems, for example, alcoholism, obesity, fear reduction, sexual dysfunction, career indecision, and academic problems; however, they are less successful for smoking cessation (Craighead, McNamara & Horan, 1984).

Using *Feeling Good* in cognitive bibliotherapy for repression has been proved

effective with middle-aged adults (Jamison, 1992). Besides, Smith, Floyd, Scogin, and Jamison (1997) have shown that using the same book effectuated a statistically significant clinical improvement, over three-months cognitive bibliotherapy, in mild and moderate depression in older adults.

Bowman, Scogin, and Lyrene (1995) adopted two totally self-help approaches (self-administered approach): cognitive bibliotherapy and self-examination therapy, then contrasted the experimental groups with a control group to examine which approach had more impact on reducing the symptoms of depression. In this study, they identified “cognitive bibliotherapy” as reading some kind of practical book about cognitive therapy to help oneself, for example, using the techniques of *Feeling Good* (Burns, 1980) to reduce depressive symptoms. The three treatment groups were assessed by three measures before treatment. The three measures used were: (1) Hamilton Rating Scale for Depression (HRSD; Hamilton, 1960), a 21-item interview-based measure, screened at intake. Four interviews were randomly chosen to be audiotaped, and two judges and the interviewer rated subjects on the HRSD. The reliability of interviews, evaluated as results of the average percentage of 21 items for four interviews, was 84% (range=71% - 95%). (2) Beck Depression Inventory (BDI): a self-report measure. (3) Automatic Thought Questionnaire (ATQ): a self-report measure. The sample size was 32, 20 females and 12 males. Analysis of variance (ANOVA) and chi-Square tests revealed that there were no significant group differences ($p > .05$) in age or sex,

respectively. The procedures were: (a) The subjects had received the HRSD interview, completed the BDI and ATQ assessments before treatment. (b) Subjects were assigned randomly to the following three treatment conditions; Group A (Cognitive bibliotherapy): read *Feeling Good*, in which the subjects learned how to apply the techniques of cognitive therapy to their lives from this self-help book; group B (Self-examination therapy): read a “self-examination booklet” containing 39 pages, and completed a “relevance sheet” to show the subjects what was relevant to their lives and record what mattered in their lives; and group C was a control group. (c) Groups A and B received four weeks treatment, group C waited for one month, then were assigned randomly to either cognitive bibliotherapy or self-examination therapy. (d) Groups A, B, and C were re-evaluated on the HRSD, BDI, and ATQ after four weeks. (e) Groups A and B were evaluated a third time two months after treatment had ended. Group C was evaluated a third time after receiving either cognitive bibliotherapy or self-examination therapy. During the research, the researcher made phone calls to the subjects to evaluate their progress informally, and answer their questions about anything they found unclear each week, but did not provide counselling over the phone. The duration of calls was phone restricted to about five minutes. Analysis of covariance was conducted on the tests of HRSD, BDI, and ATQ. The outcomes revealed that participants who underwent Cognitive bibliotherapy and Self-examination therapy showed much greater reduction in depressive symptoms than participants in the wait control group.

Scogin, Hamblin and Beutler (1987) found that clients who read *Feel Good* made significantly better progress than those who read *Man's search for meaning* (Frankl, 1963) in research on depression in older adults. As Floyd (2003) indicated, it is better to use depression-specific books for treating the depressed. In this case, Frankl's inspirational book is nonspecific, but Burns' focuses on specific themes which are more directly relevant to reduction of depression. Further, Hynes and Hynes-Berry (1986) indicated that "effective bibliotherapy is not to stir emotions but to integrate them" (p.95). Therefore, it is better to avoid using nonfiction prose that details certain disasters, traumatic experiences or events, because they might evoke strong emotion, but only provide limited opportunities to vent the client's submerged emotions. Therefore, such a book may not be an ideal recommendation for combating depression. It is easy to identify the causation from a fictional context, but clients might have difficulty integrating the emotions, and finally going beyond the suffering.

Marlowe and Maycock (2000) demonstrated effectiveness in changing teachers' punitive attitude toward children by a phenomenological study of clients' experience of bibliotherapy. The teachers also became more understanding and accepting of children with emotional difficulties after treatment. The procedure of this study was as follows: (1) Subjects selected: participants (N=29) were enrolled on the course "Introduction to emotional disturbance", in which they were taught and encouraged to establish relationships with emotionally and behaviourally disturbed students. (2) Instruments: 5

Torey Hayden's books (nonfiction-autobiographical style). (3) Assessments: The Survey of Attitudes Toward Children (SATC) which included a 27-item self-report scale with high reliability and validity (Kotzen, 1994). Bibliotherapeutic Checklist (BC), 20-item Likert-type rating scale with three subscales: self-recognition, ways of feeling, and ways of knowing, with high test-retest correlation and coefficient alpha statistics, and acceptable statistical significance (Marlowe & Maycock, 1998). (4) Procedures: The participants read and discussed the recommended books in group bibliotherapy. After that, participants completed the rating scale of SATC and BC during the first and last meetings of a 15-week series. Then they complete another questionnaire about the impact of reading Hayden's text. Finally, they kept journals weekly about their reflections on reading. (5) Data analysis: Phenomenological analysis of the subjects' journal entries which found the impact was through identification with the protagonist, which produced emotional and cognitive learning. The post-test mean of SATC is 58.89 (SD=14.97) was lower than the pre-test mean of 65.52 (SD=13.79), $t(28)=4.52$, $p<.0001$, which means there was a significant decrease in punitiveness. Both pre-test and post-test means fell within the average range of punitiveness (48-81), with individual score ranges at pre-test 44-89, and at post-test 33-86. This study showed that recognizing oneself in the story character is a vital element in the experience of bibliotherapy. The table of analysis of BC is shown below:

Table 2-4: The table of analysis of Bibliotherapeutic Checklist

Subscales	Self-recognition	Ways of feeling	Ways of knowing
Self-recognition			
Ways of feeling	$r=.86, p<.001^*$		
Ways of knowing	$r=.69, p<.001^*$	$r=.84, p<.001^*$	
Decrease punitiveness	$r=.72, p<.001^*$	$r=.59, p<.001^*$	$r=.51, p<.01^*$

The score of BC total scale: $r=.58, p<.001^*$

* The results of Pearson product-moment correlations are positive and significant.

Overall, in all kinds of therapy nowadays, the clients tend to take more responsibility for therapeutic outcomes, and bibliotherapy is no exception. Although the counsellor's skills of intervention and facilitation are crucial, the effectual outcomes are really generated from the clients' involvement and insights.

2.8.3. The limitations of bibliotherapy

Coleman and Ganong (1990) claimed that bibliotherapy is not a panacea and cannot work on everything. We should not have unrealistic expectations of bibliotherapy as a technique, because it inevitably has some limitations, as everything does. It will be influenced by the reliability of the process, its accessibility, how proficient the counsellor is, and how effectively the reading material is selected, etc. It seems that bibliotherapy will have less impact on people with reading deficiencies and those who are illiterate. For these nonreaders, audio-visual materials are available

instead of traditional books. Nevertheless, these may still be a difference in the ability to grasp and interpret meaning between the illiterate and educated people, who are better able to take advantage of bibliotherapy. Besides, there are some clients for whom bibliotherapy is inappropriate, for instance, psychotic patients, people with severe affective problem, personality disorders, abnormal behaviour, difficulty in concentration, or a lack of interest in reading, etc. These factors would impede access to bibliotherapy. These prerequisites should be seriously considered before initiating bibliotherapy, to avoid adverse effects. Apart from these basic constraints, there still are some points that need to be discussed, as follows:

- **Bibliotherapy is better accompanied by follow-up activity or combined with another psychological intervention**

Sometimes, use of self-help materials/manuals with supervision by a therapist, or even a totally self-help approach without therapist contact, is deemed as a part of bibliotherapy. Strictly speaking, reading materials are a supplementary medium that cannot totally replace the therapist. J. A. Pardeck and J. T. Pardeck (1984) indicated that bibliotherapy needs the therapist's guidance in every process, such as book selection, interpretation, catharsis and generating insights. Bibliotherapy is not "the core treatment approach" (Pardeck, 1994a). Bibliotherapy with follow-up activity or combined with another form of psychotherapy has been shown to be more beneficial than a self-help approach, as shown in many journal articles. For example, two studies concerning

emotional adjustment found that bibliotherapy coupled with discussions was more effective than assigned therapeutic readings alone (Sadler, 1982)..

- **Adopting inappropriate materials would cause negative impacts**

It is of prime importance to select the right materials. Conversely, if the materials are inappropriate for the clients, this could bring about harmful impacts. For example, some children's literature in the early 1900s contained negative portrayals of black Americans. Singh (1973) said of such negative descriptions, "Gross, stark stereotypes, subtle distortions, and omissions in references to ethnic groups in children's literature play a direct part in forming children's attitudes at an early age" (p.1). Hence, the prerequisite is that reading materials should be selected carefully and have been read before, otherwise, the clients could be frustrated or hurt.

- **The authoritative role of bibliotherapy**

Bibliotherapy flourished during the 1930s-1970s in America. At that time, clients were required to enter into a power-structured relationship between the helped and helper to accomplish reading the prescribed books. Owing to the trend against the authoritarian role of the therapist in relations with clients, and against prescribed reading of psychological books, some people refuse to take therapy because they deem it as an authoritarian activity. Such a therapeutic relationship could create an atmosphere of oppression instead of autonomy. For this reason, the term "recommended books" would be better than "prescribed books".

Some people might refuse to be directed or educated. Instead, they prefer to be more spontaneous, active and more self-directed. Therefore, the self-help approach has become popular, including self-help, without any assistance or with minimal guidance from a therapist. In any case, the bibliotherapist's role should not be didactic like that of an instructor or trainer, but considerate and understanding, while maintaining professional authority. Indeed, it needs to be linked to different styles of leadership, used in flexible ways in an equal, professional, trusting context, to create a warmer atmosphere in therapy.

Recently, bibliotherapy has evolved to various forms of word-based therapies such as poetry therapy, or journal therapy in which the client keeps a diary to reflect on life issues. The role of therapist is like a helper to catalyse with less dominant. However, bibliotherapy is still a good choice for problem prevention and vehicle for mental health education. The main advantages are the wide range of materials available, that can be selected according to different clients' needs, and interests, and flexibility to combine with other interventions to give clients the greatest help possible. Thus, bibliotherapy could become one of the efficacious non-traditional treatments, especially in this increasingly self-help-oriented society.

2.9. Summary

This chapter has provided a theoretical base for this study by explaining the nature of and rationale for bibliotherapy. It was noted that there are several varied terms

basically equivalent to bibliotherapy, such as reading therapy, literature therapy, therapeutic reading, biblioguidance, bibliocounselling, etc. However, most help professionals have adopted and recognized the term “bibliotherapy”. Bibliotherapy was defined in Webster’s Third New International Dictionary since 1961 as “The use of selected reading materials as therapeutic adjuvants in medicine and psychiatry; and as guidance in the solution of personal problems through directed reading”. Strictly speaking, bibliotherapy is the use of selected reading materials as a medium in problem-solving or development needs, involving follow-up activity under professional psychological guidance, or combined with other form of psychotherapy. However, more and more self-help materials/manuals prescribed by trained therapists, with minimal therapist contact or even no therapist contact, are also deemed as a type of bibliotherapy, and many research articles have testified to the effectiveness of self-help reading materials. In addressing minor problems or developmental psychological growth, self-help manuals might be a helpful choice. Nevertheless, persons with chronic issues of tardy development, complex dilemmas, or unconscious drives might need to interact with well-trained therapists and communicate through bibliotherapy. Patients may also need to be very carefully protected under ethics codes.

The following are the recommended phases of bibliotherapy: (1) diagnose; (2) establish rapport; (3) recommend/introduce the material; (4) reading; (5) follow-up activities; (6) assessment. Especially the reading material recommendation plays a

crucial role in these phases. This reading should of course be appropriate to the culturally specific context. With this requirement in mind, the following chapter introduces the philosophical and cultural background of the readings selected for this study, and provides information on their author and his key concepts.

CHAPTER THREE

CHINESE PHILOSOPHER ZHUANG ZI AND HIS BOOK

First, I will explain the historical background of how Zhuang Zi's concepts originated, and simultaneously introduce the other schools of thought which contend to constitute the spectacular philosophical golden period of China, the Eastern Zhou Dynasty (770-221 B.C.). Next, I will introduce the person of Zhuang Zi, the details of his book, and the implications of Daoism. I will explain several important contrasts with other Chinese philosophies to clarify the essence of Zhuang Zi's concepts, and to critique their practicality and meaning for our times. Finally, I will introduce my extraction and organization of his main themes and illustrate how I have applied these in this study.

3.1. Historical background

In the Eastern Zhou Dynasty, the emperor ruled in name only, and China was divided into several feudal vassal territories, in which local kings were ambitious for enlarged territory and prestige. Wars continued to decimate civilians and cause insecurity, leaving the populace in a precarious state.

Chinese culture has profound foundations as early as the Xia Dynasty (21st-16th century B.C.) and the Shang Dynasty (16th-11th century B.C.). Subsequently, the Western Zhou (11th century-771 B.C.), and the Eastern Zhou Dynasty included the Spring & Autumn Period (770-475 B.C.) and the Warring States Period (475-221 B.C.).

The Zhou Dynasty inherited the preceding classics and nourished the established splendid climate of learning. In particular, Confucianism, Daoism, Mohist School, and the Legalist School were the most influential schools. However, the emperor Qin Shi (Qin Dynasty, 221-207 B.C.) was so tyrannical as to burn books and bury scholars alive, temporarily halting the development of philosophy. In the Western Han Dynasty (206 B.C.-24 A.D.) the emperor adopted Confucianism as the state philosophy, and Confucianism became the mainstream in China from that time. Nevertheless, Daoism still continued, submerged as the solace of disappointed men of letters in non-governmental circles. Also, Daoism partly branched out from the philosophical field, and was transformed into the prevalent folk religion, which was imbued with Confucian values of hierarchy as well. Originally, only the nobles had the privilege of education, and they monopolized the preservation of knowledge. However, with the feudal system established and vassals contending for hegemony, the Crown declined, and also many nobles were reduced to commoners. Knowledge spread downward to the commoners. Common people could then become pupils to a master in a solemn ceremony, to gain knowledge. The degenerate nobles and the learned scholars could, by teaching, earn a living anywhere. Therefore, knowledge was disseminated to the civil society and developed freely. Confucius was a pioneer of private instruction, with about three thousand apprentices.

Another motive power for improving freedom of thought and dissemination of

knowledge was the development of writing materials and instruments. In the Shang Dynasty, written words took the form of picture-symbols carved on metal, stone, sheep bones or tortoise shells, but such crude and clumsy instruments made writing difficult. By the Spring & Autumn Period, words were written on bamboo slips and silk books, which greatly improved the development of thought through articles which became much more lengthy and systematic.

However, old traditions and systems collapsed in such a turbulent social period. The feudal lords, seeking strategies for making their domains wealthy and powerful, recruited intellectuals. This situation accelerated the spread of education outside the noble class, and created various schools of thought and their proponents during the period before the Qin Dynasty. The Chinese tradition of philosophical and historical/political writings became well established and integrated with courtly life, but not tied to a religious hierarchy; separate voices could be heard. Most philosophers as advisors to rulers proposed numerous theories for running the state well to give the people peace and security, or to solve social problems. However, Daoism was more concerned with individual philosophy and provided an alternative way of dealing with real-life problems and life adversity in realms outside of state control.

How can people deal with an epoch of uncertainty, chaos, and greed. We might ask that question even in today's society. Zhuang Zi's concepts gained currency and consoled many people by providing a philosophy of detachment from worldly ambitions,

and a way to deal with personal misfortune. In Zhuang Zi's fables, he advocated reducing excessive desires, and setting one's mind free by adjusting to life circumstances and nature, thus penetrating the roots of personal and moral dilemmas.

3.1.1. The Daoist philosopher Zhuang Zi

Zhuang Zi (Chuang Tzu or Chuang Tse in other Romanization systems) means "Master Zhuang" in Chinese. "Zi" literally "son", was at that time a respectful form of address meaning master. Zhuang was the family name. His full name was Zhuang Zhou, and he lived around 369-286 B.C. He is the most eminent philosopher of Daoism with the exception of its founder, Lao Zi (Lao Tzu). There are few formal records concerning his life history, in the historical records written by Si-Ma Qian, "Shih Chi" (Han Dynasty). According to this record, Zhuang Zi was once an administrator of the Garden of Qi. King Chu Wei invited him to be his prime minister, but he rejected the offer, and instead made shoes to eke out a living for the rest of his life. In Zhuang Zi's writings, he often disputed with Hui Shi who was famous for debating and belonged to the School of Names (i.e., group of sophists, logicians, or dialecticians), However, he lamented the loss of a capable opponent when Hui Shi died; heroes respect heroes.

At that time, greedy and cruel local kings engaged in frequent battles to extend their domains, causing great civilian suffering and destitution. Zhuang Zi solemnly denounced this wickedness; in his book he described the miserable results of the tyrannical rule of King Wei, who recklessly ordered his innocent subjects to go to the

battlefield. Their lives were considered so insignificant that, “the dead filled the valleys, just like dried straw.”(Ch.4, para.1). Such a society was fraught with brutal fights and political clashes; justice and virtue became hypocritical propaganda. Thus, the conscientious elite would not assist such an authority in governing.

Daoist philosophy rejected social conformism and bookishness (Zhang & Veenhoven, 2008). Zhuang Zi detested the invidious political force that devalued peoples’ lives. He valued individual subjectivity and dignity, and sought to emancipate people from worldly temptation, e.g., political ambition and financial standing.

3.1.2. The distinction between Daoist philosophy and Daoist religion

Daoist philosophy is synonymous with “Dao Jia” (i.e., the philosophical school of Dao), “Philosophical Daoism (Taoism)”, or “Lao-Zhuang philosophy”, which will be discussed in this study. There is another field that people often confuse with the above, called “Dao Jiao” or “Religious Daoism”, some of whose ideas are gained from Lao Zi, but transformed into folk religion in the form of Daoist priests, Daoist canon, rites, and temples. Thus, it is necessary to divide Daoism into two aspects to avoid confusion. Although both emphasize nourishing one’s life, Daoist philosophy proclaimed the natural way by avoiding indulging in desires and accepted the destined life span. In contrast, the ancient Daoist religion adopted an unnatural way to prolong one’s life or keep young by taking an elixir. The two are totally different, as shown in the following descriptions:

Table 3-1: The differences between Daoist philosophy and Daoist religion

	Daoist philosophy	Daoist religion
Synonym	Dao Jia Philosophical Daoism Lao-Zhuang philosophy	Dao Jiao Religious Daoism
Time of origin	6th century B.C.	2nd century A.D.
Originator	Lao Zi, (born around 550 B.C.) Zhuang Zi (369-286 B.C.)	Zhang Dao-Ling (born around 110 A.D.)
Writing	Dao De Jing (Author: Lao Zi) Zhuang Zi (Author: Zhuang Zi)	Dao Zang (Author: Zhang Dao-Ling)

Most religions and world views claim universality, i.e., that they encompass the universe of possibilities and ultimate moral values. We may see Daoism in this light, but also consider its internal logic and principles. At least in the philosophical form, it does not establish a central deity or hierarchy of deities, but relates directly to the concrete life and internal psychology of the individual, without the intercession of deities or supernatural belief. Therefore, we can justify defining philosophical Daoism as a value system but not a religion.

3.2. The book of Zhuang Zi

Before starting to introduce Zhuang Zi's fables, something important needs to be clarified. Chinese words themselves are constituted of meaning and sound, but they also

contain pictorial elements in the writing which may carry a range of connotations. This is quite different from the Roman alphabet used in most western languages, in which the writing is only a phonetic representation of the spoken word. From the psychological aspect of language, the Chinese word in writing carries many implications, and may be felt to be mysterious and many-layered in meaning.

3.2.1. A note on phonetic transliteration systems

In order to render the sound of Chinese characters in English, there are two main types of phonetic transliteration into alphabetical writing. One is “Pinyin”, which has been developed by the People’s Republic of China. It seems to be easier to learn and has been largely accepted by scholars; it prevails currently not only in the academic field, but also in translating for daily usage. The other system is called “Wade-Giles Romanization”, which is more complicated than the former and reflects some earlier linguistic studies; it was utilized in past decades in Taiwan and is still used nowadays in some places. Therefore, both systems of transliteration will be mentioned in this study. Pinyin will be the primary translation for Chinese terms and Wade-Giles will follow in brackets. However, most renderings have not yet been unified, because so many countries make up Chinese society. Many articles in internet resources are still utilizing either of these two systems, making spelling of transliterated Chinese words confusing (see appendix 3-1 for comparison of these two systems).

3.2.2. The traits of the book *Zhuang Zi*

“Zhuang Zi” is also the title of the book that contains the words of the philosopher by the same name; it has over one hundred thousand words and over a hundred fables. The first seven chapters, called the “inner chapters”, were written by Zhuang Zi himself, and the remaining chapters, including chapters 8- 22 which are called the “outer chapters”, and chs. 23- 33 “miscellaneous chapters” are believed to have been compiled or written by his disciples or other later anonymous Daoist philosophers. The vernacular Chinese editions of *Zhuang Zi* used in this study are mainly based on Wu (2000), Chen (1998), Zhang (1993), and Guo (Chinese Qing Dynasty 1800s, 2005 reprint).

Zhuang Zi possessed the literary talent to create a writing style that is full of imagination, fantasy, irony, and implications. His indirect way of exposition serves to make people feel engaged and less defensive. For the sake of being accessible to the general public, he adopted the following devices (ch. 33):

- A. Metaphors: He created many characters or fables to express how to live carefree under adverse circumstances, and how to return to one’s purity after contamination by excessive desires.
- B. Borrowing: He borrowed many significant and famous people as spokesmen in his fabricated plots to make the context seem important and to impress people. The celebrities included those such as Confucius, Yan Hui, Lie Zi, etc.
- C. Jotting: Some of his fables are so brief that they seem to be uncompleted, and some

are written to follow his bent, but these allow people to project their own completion.

These remarkable fables implied his philosophy of life. In the version used in this study, the fables are illustrated by the famous Taiwanese cartoonist Tsai Chih-Chung, who successfully illustrated a series of classics understandable and interesting to the younger generation. Tsai's works have been very popular in Chinese society, and his book became the top-selling book in Taiwan when it was launched, and is still popular on the internet or Youtube. There are two volumes of Zhuang Zi's fables, from which an example is demonstrated as follows:

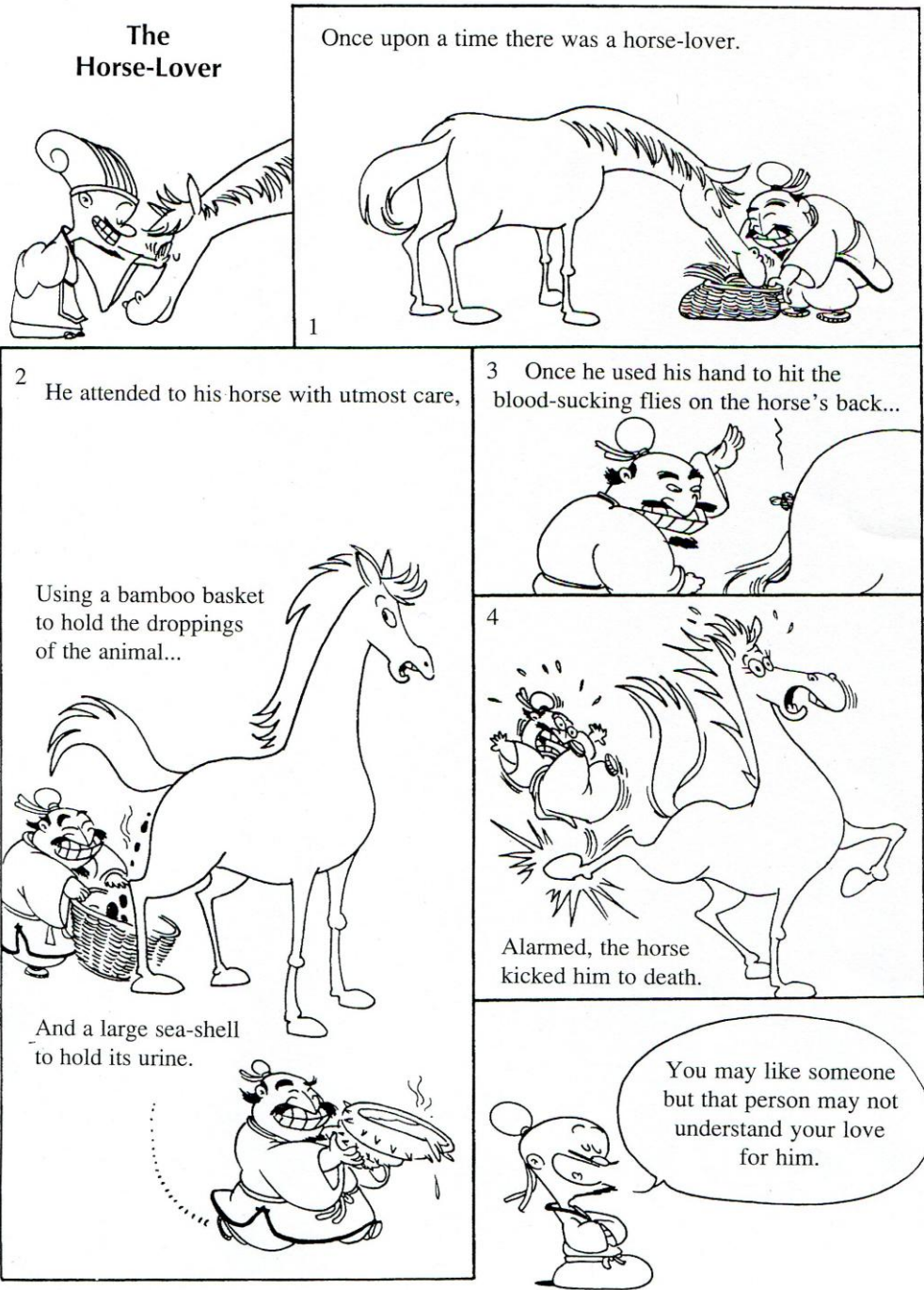


Figure 3-1: An illustration for “The Horse-Lover”

3.2.3. The translations of the book *Zhuang Zi*

The earliest translation of Chinese classics were done by Italian and French Catholic missionaries in China. In 1891, the Oxford University Sinologist, professor

James Legge (1814~1897) published “*The Books of Taoism*” in the *Sacred Books of the East*, which is the leading English complete version of Zhuang Zi. In 1968, Columbia University professor Burton Watson published “*The complete works of Chuang Tzu*” which is regarded as the best translation. However, the famous Chinese Sinologist Yu-Lan Fang (1931) translated Zhuang Zi into English only for chapters 1-7. Besides these, Heidegger and Paul Shuh-yi Hsiao tried to translate Lao Zi’s “*Dao De Jing*” into German, but they failed to complete it. Nowadays, there are various themes on Zhuang Zi published, but these books use different translations of Daoist terms and names which has impeded their dissemination and internationalization.

3.3. The essence of Daoist philosophy

“Dao” is hard to describe completely in words due to its abstraction and holism. Generally, “Dao” has been translated as “Way”, “Path”, “the natural course of things”, “the way of Nature”, “the operational rule of Nature”. No matter what it is called, the essence of “Dao” would not be changed, no matter who the adherents are. We may illustrate this point with reference to a famous saying in Western literature; William Shakespeare (1564~1616) said, “What’s in a name? That which we call a rose by any other name would smell as sweet.” Thus, to fix on the surface meaning of names would result in partial understanding.

3.3.1. The meaning of Dao

As a philosophical concept which is deeply embedded in a particular culture, there is no objective standard or concrete measure by which to define “Dao”. There is only the subjective description internal to the language and culture. Lao Zi said that it would be not the eternal and supreme “Dao” if it could be simply defined (Lao Zi, ch. 1). Of course, it may be understood that adherents do not like a limiting definition, but claim to encompass the universal. However, there have been many renditions in English. According to Hu (1986), “Dao” is based on the operational rules of nature, i.e., the law of nature, which is the fundamental essence of all beings to control the operation of planets, and biological process of life, e.g., birth, age, illness, and death. Also, Needham (1954) defined “Dao” as the operational rule of the cosmos, i.e., natural law. This is analogous to “Logos” as defined by the ancient Greek philosopher Heraclitus (540~480 B.C.) of Ephesus, implying those things which are in accordance with the Logos (literally, reason, account, word), i.e., the constant principle of the cosmos. Also, the Stoics understood it as the account which governs everything (Robinson, 1987).

Schwartz (1985) thought that “Dao” must be based on practical functions in life. Another view is that “Dao” has been changing unceasingly and developing infinitely. We might say that the concept of “Dao” is similar to the existentialist Heidegger’s (2005) definition of “Being”, i.e., the existing rule, or operational rule of the Universe, in which everything has been becoming continuously; it is not a fixed immovable

phenomenon.

In my view, Daoism is a kind of natural philosophy regarding life attitudes and values, i.e., go with the flow. However, it is different from naturalism, which means adopting scientific methods to understand the natural world. Wang et al. (2005) indicated that “Nature” in Daoism does not mean the natural phenomena in physical science, but means nature of the life value, i.e., value-free, repeal contrived prejudice to return to appreciate thing’s natural way.

Due to the abstraction of “Dao”, it is better grasped by experiencing or through insight from the mind. This is similar to Polanyi’s so-called “tacit knowledge”, i.e., “We can know more than we can tell” (Polanyi, 1967, p. 4). This act of knowing is a sort of intuitive and pre-logical phase of knowing. On the other hand, Polanyi’s “explicit knowledge” is articulate but fragmented and still relies on a much larger, hidden foundation of this tacit knowledge (Polanyi, 1958). Although tacit knowledge can help grasp the hidden truth, it is more subjective and embedded in the process of experiencing than explicit knowledge.

3.3.2. The implications of Nothingness (“Xu” in Chinese)

Daoist philosophy is a philosophical perspective or “vision form”, which is a more abstract, but less detailed, practical approach (Mou, 1983). “Vision form”, i.e., mental state indicates that whenever one reaches a particular level of insight, your vision or perspective about the world is based on that level (Mou, 1997). Each person could have

a different level of life experience and life vision, so keeping the mind empty and flexible is the optimal way of enhancing one's form of vision.

“Xu” (i.e., Vacuum, openness, self-less) is the mind state which keeps the capacity of the mind space open and calm. This is illustrated in the fable, “Yan Hui's Fasting of the Mind” (ch. 4), which means uprooting one's prejudices and desires in order to keep the mind empty and humble. Another metaphor in Zhuang Zi's philosophy of Xu is “the mind of a great man is like the mirror”, in which just like a face a mirror, one truly reflects one's negative feelings towards things; however, one needs to forget emotional disturbances when a thing is past, just as a mirror is blank after a person ceases to face it (ch. 7).

In Daoism, “Nature” means “Natural state” without demanding, and with the attitudes of keeping moderate life pace. Zhuang Zi encouraged people to acquire some wisdom from insight of Nature. For example, Seas originate in thousands of rivers and become huge because it locates the lowest place (ch. 66); likewise, people would be welcomed and helped if they realize the wisdom of modesty such as the nature of water.

Moreover, Lao Zi suggested seeking a state of mind that is extremely unoccupied and tranquil, as a necessary process to make all things develop spontaneously (Lao Zi, ch. 16). This is also the wisdom of “Nothingness” , or “Xu” which overcomes worldly tumult, searching for the meaning of life.

Heidegger (2002) mentioned “Nothingness” (Nichts in German), which is

influenced by Daoist philosophy, an immerse of nothingness without worries and disturbance, instead of insisting on the results, waiting for things ready, and allowing things themselves to be developed naturally (i.e., “Gelassenheit” in German). Moreover, Heidegger (2005) proposed the idea of “Angst”, which does not exactly mean “Anxiety” in English, but is a combination of worry and fear. People worry about uncertainty and withdraw from this world. This “Angst” causes the feeling of nothingness. Nothingness does not really mean feeling nothing inside, but its real pain is in a suspicion of the lack of meaning in life. The solution is in looking for the authentic ourselves.

3.3.3. The explanation of Negation (“Wu” in Chinese)

Negation, “non” (i.e., “Wu” in Chinese) does not mean exactly nothing. Seemingly, Daoist philosophy has many negative narratives, for instance, “non-knowledge”, “non-desires”, “non-dependence”, “non-doing”, etc. “Non” actually can be explained as “to transcend”, i.e., it still can “have”, but this “have” does not suffer restriction by outward conditions.

Therefore, “non-knowledge” (“wu zhi” in Chinese) means not being restricted or confused by the present knowledge, but it does not mean giving up or devaluing knowledge. Non-desires (“wu yu” in Chinese) means one can still have desire but this desire would not enslave or disturb one (as in the fable of “The Shepherd Lost his Sheep”, ch. 8). Non-dependence (“wu dai” in Chinese) means not to depend on or be

bound by certain things (as in the fable of “Lie Zi Moved by Wind”, ch. 1). Non-doing (“wu wei” in Chinese) does not mean inactivity, but means to not be demanding, as a manner of nature, and to be free from contrived and selfish conduct.

3.3.4. The life perspective of Zhuang Zi

In the spiritual self-cultivation process, the first step is to “exclude” material temptation. Next, one should “forget” desires, i.e., one would not be disturbed by desires any more. Then, the aim is to “empty” one’s mind and reach a tranquil and carefree state. The first chapter of Zhuang Zi, “Xiao Yao You”, is the most comprehensive overview of his thoughts. “Xiao Yao” means the ultimate happiness of life. “You” means the practice of accomplishments. Carefree spirit accompanying this unlimited cosmos. Contemporary Chinese scholar, Mou Zung San (1983) characterized three stages of life as below:

1. Self-exploration stage: just like the fable in which the roc flew up high up into the sky to broaden its view, then toward the faraway south. At the same time, the ignorant sparrow sneered at the stupid roc, wondering why it flew up to a vast empty sky (ch. 1).
2. Self-overcoming stage: Zhuang Zi emphasized that most people feel vanity when they are applauded by the authority, but ordinarily they are lost by themselves. However, he commended the example of Sung Rung Zi, who was not disturbed by either outward flattery or calumny (ch.1). A similar point is made by the ancient

Biblical story in which a wise man told King Solomon the famous saying which contains all human wisdom: All of the present things will one day be the past. In this perspective, one should not be influenced by outward temptations; and should never yield in spite of reverses.

3. Self-transcendence stage: Zhuang Zi deconstructed the common social values. He argued that desires are endless; but people should learn to be content with life. They should not to be governed by desires. If we totally unload worldly pursuits, then we can possess our naive nature again.

In the self-transcendence stage, “The great man should not be trammelled by personal profits, establishing exploits, or gaining fame” (ch. 1, para. 1); spiritual enrichment is more important than worldly pursuits. Similarly, Socrates said, “Other men live to eat, while I eat to live.”

Titles or privilege are really nothing compared to life. For Zhuang Zi, living freely but poorly is better than being honoured in death (ch. 17). If one does not care about fame or fortune, then one takes back ownership of one’s happiness and freedom from the outside world.

3.3.5. The living aesthetic of Zhuang Zi’s philosophy

Heidegger (2005) defined aesthetic as pure, detached from personal interest and calculations based on worldly considerations; therefore, disinterestedness and detachment are the ultimate of aesthetics.

Practising “Dao” is the process of experiencing the aesthetic. There is great beauty in nature without speaking (ch. 22). What exists in nature without artificial carving is real beauty. Likewise, only when people open their minds sincerely without artificial tricks, can they appreciate and be interlinked with all beings, and live harmoniously in the cosmos (ch. 2).

Zhuang Zi often stood at a detached height to think about life issues, for example, viewing present life from the perspective of the future, or viewing worldly affairs from the perspective of the eternal cosmos. From such a perspective, everything may be changeable and may be sorted out eventually.

3.3.6. Stress coping through Zhuang Zi’s concepts

Worries and fear accompany people all their lives (ch. 18); they could become stressors to disturb us. How can we release our minds from this torture? If we are too worried about outward things, then we would feel stressed, just like gamblers fixated on bets. This would cause strong anxiety that is unnecessary (ch. 19).

Selye (1974) proposed that it is impossible for people to live without any stress in life; indeed, moderate stress can stimulate people to make progress. However, going to extremes, i.e., too little or too much stress, would cause negative effects in personal development. Following the natural rule or developing at one’s natural speed is the moderate way to make life easy. Conversely, to go against the natural rule would even cause destruction, a lesson that is shown in the fable “The seabird does not like music”

(ch. 18). The king doted on a precious seabird and treated it as an honoured guest, bestowing on it valuable wine to drink instead of water, feeding it with prime meat every day, exposing it to the sound of the palace orchestra instead of natural sounds. However, such feeding with a human diet will kill a bird. Thus, the lesson is that by following the rule of nature we can avoid negative outcomes and decrease stress in life. Do not let man-made cleverness destroy one's natural instincts or endanger one's life; and not let greedy conduct destroy one's reputation. In this way, one can return to one's original purity and simplicity, and rediscover one's authentic self (ch. 17, para. 4).

Undoubtedly, we can gain life wisdom by learning from nature. For example, the sea is located at the lowest point but all water flows into it and makes it become a vast expanse of water. People who learn to be humble and low-keyed, seeing themselves low like the sea, pay more attention to cultivating inner virtues without flaunting superiority, not showing off their exploits or skills (as in the fable of "Death of a Show-off Monkey", ch. 24). Being humble can ward off others' jealousy or slander, especially when one succeeds in outstanding achievements that threaten the throne. It is best not to care about possessing great profits or achievements; to possess our true self is the greatest possession in the world.

The responses to stress are not only related to the stress itself, but also related to the individual's cognitive thinking and evaluation toward the stress. In the fable of King Qi-Huan's Fear of Ghosts (ch. 19), King Qi Huan met the ghost during hunting and got

sick seriously. One day, the wise man told to him: Nobody can hurt you, only you can hurt yourself, people would become irritable if their negative emotions flow upward to the top of body; people would become forgetful if their negative emotions flow downward to the body; but they would become sick if their negative emotions are stuck neither upward nor downward. Thus, the king urgently need to release his negative emotions, then can heal his sickness. Afterward, the king asked this wise man if there are still ghosts in the world, the wise man replied, yes, and described the appearances of all ghosts. Originally, the king thought the unknown ghost possibly symbolized something ominous so that he felt a debilitating fear and became sick. However, when he was told that this ghost was an omen that he would be a great overlord, he recovered and was delighted, not fearing the ghost any more. When people feel insecure, their minds will be filled with worry, anxiety, fear, etc. When subject and object are in opposition, it brings forth stress. Only by breaking this antagonism can one be liberated. Thus, Zhuang Zi recommended accommodating to the circumstances; it is useless to confront the tough with toughness. When confronted with stress, it is better to calm down, to ponder things in a logical way.

Heidegger (1959) mentioned Zhuang Zi's fable "Useless Ailanthus", and indicated that the uselessness implied inoccupation, leisure, waiting, and *Gelassenheit* (e.g., "non-doing", "wu wei" in Chinese); this is the highest state in life. Zhuang Zi said that the tree is useless for a carpenter, but really useful for itself, allowing its exemption

from the axe. Such reverse thinking facilitates release of negative emotions in adversity and effectively coping with stress.

Finally, the response to stress depends upon one's explanation of the stress. For example, in the fable "The man who hates his shadow" (ch. 31; see Appendix 3-2), the man hated his shadow because he thought it was just like the troubles and stress always following him, and he was continually running desperately in order to escape the shadow. However, the quicker he ran, the closer the shadow followed. Not surprisingly, he died early as he ran to exhaustion. This lesson is that evasion is an ineffective way of countering stress. In this case, the man needed only to face the sun, and the shadow would disappear; or take a rest under a tree so he could not see his shadow. Zhuang Zi made this simple fable a metaphor for people pursuing fame and fortune throughout their lives, and exhausting themselves like this man.

3.4. Comparison of Eastern philosophies

There are many similarities in the perspectives of life among oriental philosophies. However, there are still many subtle differences in positions among the various eastern schools of thought. The following comparisons may help to identify and highlight their traits.

3.4.1. The origin of Zhuang Zi from Lao Zi

The essential thoughts of Zhuang Zi (369-286 B.C.) were inherited from Lao Zi (born around 550 B.C.) and thence enriched. Both advocated "following the operational

rules of nature” as the ultimate guideline. Removing excessive desires (i.e., greed) and freeing oneself from affectation were the common practical approaches. However, there are some different emphases in the two schools of thought: First of all, Lao Zi wrote *Dao De Jing*, which is a brief doctrinal essay of only about 5,000 words. The expressive style of Lao Zi is more theoretical, systematic, and organized; it tends to be epistemological. In contrast, Zhuang Zi’s fables are full of vivid metaphors, artistry, free style, fairies, and romantic flights; they tend towards experiential aesthetics. Secondly, Lao Zi emphasized valuing life and avoiding disaster that would endanger life, but Zhuang Zi valued life and emphasis on spiritual freedom, and proposed taking things philosophically. Thirdly, in their attitude towards the world, Lao Zi accepted the need to adopt tactics to achieve a purpose; while on the contrary, Zhuang Zi tended to stand aloof from worldly pursuits. For example, Lao Zi addressed the advantage of placing oneself in a lower position in order to get help or avoid other’s jealousy (ch. 66; ch. 76), but Zhuang Zi advocated humility in awareness of one’s smallness. Lao Zi adopted “suppleness” in order to defeat hard things, for example, water can make holes; but Zhuang Zi advocated suppleness to overcome one’s own stubbornness. Lao Zi emphasized that the real reason for not capturing a prize at the first opportunity is to wait to get the biggest; but the drive for those of Zhuang Zi’s persuasion is to avoid endangerment, while regarding all things as equal, transcending interest relationships. Finally, Lao Zi was more concerned with political issues, while Zhuang Zi was

concerned only with individual spiritual refinement.

3.4.2. Zhuang Zi’s philosophy in contrast to Confucianism

Confucianism is the mainstream principle for practising moral culture which continues in prominence in Chinese society to the present. It is highly formalized and hierarchical, emphasizing the rights and duties of the collective: family, clan, government, and state. It deals with the social and political spheres. However, Daoist philosophy may be considered a complementary or even alternative philosophy, that deals with the inner self, in Western terms the psyche, and has comforted many frustrated people in adversity, or in conflict with the established hierarchy. Both of them may be seen as contributing to social behaviour, but with different life values. A comparison between the two is as shown below:

Table 3-2: The contrast between Zhuang Zi and Confucius

	Zhuang Zi (369-286 B.C.)	Confucius (551-479 B.C.)
Cognition and value system	<ul style="list-style-type: none"> • Emphasis on individual spiritual freedom and nourishment of life rather than worldly success. • Removal of excessive material desires and vanity or craving for celebrity 	<ul style="list-style-type: none"> • Abide by moral standards and ethics • Die for justice and virtue • History is created by human agency. • Encourages human being to make contributions to society • Confucianism is concerned with the social order and hierarchical

		relationships.
Emotional expression	<ul style="list-style-type: none"> • Emphasis on humility while gaining achievements and doing benevolent action • Be calm despite outward stimulus 	<ul style="list-style-type: none"> • Feel honour in praising success and benevolent action • Encourage strong will; the more frustrated, the more courageous
Behaviour	<ul style="list-style-type: none"> • Reduce desires, especially craving for fame and fortune • Be true to self and enjoy spiritual life • Adjust oneself to changing circumstances, following the natural rule without making demands for the external conditions or other people to change. 	<ul style="list-style-type: none"> • Motivate to perform meritorious deeds • Persist in struggling for goals
Perspective of politics	<ul style="list-style-type: none"> • Do not disrupt civilian life • Oppose tedious man-made rites • All beings are equal, transcending the human social order. • Advocates a plain life, which does not mean backward civilization, but more emphasis on spiritual 	<ul style="list-style-type: none"> • Emphasis on duty and obligation towards the family and country. • Use of morality and rites to regulate people's behaviour • Carry out benevolent government • Usefulness is defined by man-made standards, so they can serve to classify good or bad.

	<p>enrichment than material enjoyment.</p> <ul style="list-style-type: none"> • Focus on individual subjectivity and inner experience. • Usefulness is defined by one's innate nature which is not distinguished as good or bad 	
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Most Chinese people think that Confucianism engenders an active social spirit that encourages intellectuals to pledge loyalty to rulers; national goals must be placed higher than individual interests, and loyal subjects must even be sacrificed for the country (Confucius, ch 15). Confucius suggested that feudal vassals abide by rightfulness and ethics, respecting the emperor but without going beyond the propriety of rites. The responsibility of intellectuals is heavy, including themes such as promoting morality to stabilize the country (Confucius, ch. 8). In contrast, followers of Daoism valued their own lives, not only for survival, but also to keep spiritual freedom in troubled times.

Confucianism encouraged scholars to study actively and perform deeds of merit and exploits. However, Daoist philosophy thought that too many contrived doctrines would interfere with the naïve nature of man and natural development of personality. Zhuang Zi articulated views of mores different from those of the Confucians. While Confucians recommended particular moral practices, Zhuang Zi considered that

intricate moral regulations only superficially regulate people's behaviour. For example, people may be expected to engage in philanthropy under certain criteria that would be hard to keep in the long term. According to Zhuang Zi, people need to internalize virtue naturally and contribute silently (ch. 5, para. 4). Morality is not an implement, or a man-made restriction, or dependent on conventional custom.

Daoist philosophy emphasized the importance of morality coming from one's authentic feelings; only that, not outside regulation, can really bring people a better life and a higher spiritual state (Lao Zi, ch. 18; ch. 19). Daoists deny the value of morality that is displayed for the sake of vanity. To behave morally purposely for social display would create greed and tend to make society fight for fame and fortune. For example, some fame is created through man-made promotion, conferring a reputation for high morality or achievement, whether or not it is deserved (Lao Zi, ch. 5; ch. 18).

Regarding practice and cultivation of one's "nature" ("Xing" in Chinese), there are quite different definitions between the two philosophies. Daoist philosophy regards a person's "nature" as his/her naïve and innate natural personality; however, in the definition of Confucianism, it means social morality and duty, which one should practise as a member of society, not the inner character or temperament of the person.

3.4.3. Daoist philosophy in contrast to Buddhism

When Buddhism entered China around 400 A.D., Buddhism was not accepted by the intellectuals. Therefore, the monks used an initial approach in which they adopted

several concepts similar to Daoism to interpret the meaning of Buddhism, which then gradually became popular in Chinese society.

There are some similarities between Daoist philosophy and Buddhism, such as the practice of meditation. Zhuang Zi adopted mind fasting and meditation to reduce one's desires and insistence; Buddhist meditation aims to reach an "empty" state. "Zen" itself means meditation. However, Buddhism somehow tends to be pessimistic regarding the processes of life; In the Buddhist view, life is filled with pain, there is no eternal happiness in life, and as a goal we finally enter an absolutely empty state. This view is parallel to the description of Schopenhauer (1788-1860), who thought that life is painful, and the only way to remove this pain is to discard desires and enter the status of emptiness of Buddhism (Schopenhauer, 1909).

On the other hand, while Zhuang Zi thought that it is hard to avoid adversity in life, life itself is not defined as pain. The only thing we can do is to accept our lives and transcend fate by discarding prejudice and making our vision broader. Zhuang Zi did not actively strive for fame and fortune, not because of fear of failure or hurt, but because fame and fortune are not absolutely necessary in life, and rather might be the root of greed. Thus, cutting off the excessive desires is the best choice for maintaining a good quality of life. It is useful for liberating one's spirit, to live happily in the world. A summary of the contrast between Zhuang Zi and Buddhism is given below:

Table 3-3: The contrast between Zhuang Zi and Buddhism

	Zhuang Zi's philosophy	Buddhism
The perspective of life	<ul style="list-style-type: none"> • Accept fate • Experience the existence of true self • Spiritual victory to transcend adversity 	<ul style="list-style-type: none"> • Life is painful and there is no eternal happiness in life.
Practice approach	<ul style="list-style-type: none"> • Remove greed • Discard prejudice • Mind fasting • Meditation 	<ul style="list-style-type: none"> • Self control in one's desires • Practise Buddhist rules and meditation
The ultimate goal and vision	<ul style="list-style-type: none"> • Be carefree, have a happy journey • Follow the operational rules of nature, go with the flow 	<ul style="list-style-type: none"> • Emptiness

Thomas William Rhys Davids (1843-1922) translated the Buddhist Sutras from the Indian Pali language into English in his *“Sacred Books of the East”* (Davids, 1881). Basically, Buddhism regarded life as full of pain, especially eight pains in life: birth, aging, sickness, closeness to death, failing to reach desires, meeting the enemy, losing lovers, and suffering arising from identifying with the five Skandhas, namely sensation,

perception, cognition, intention, and consciousness (nirvana, ch. 12). The psychosomatic activities come from our six senses: eyes, ears, nose, tongue, body, and consciousness (Za Ahan Sutras, vol. 9, no. 231). All human disturbances or faults are induced by greed, anger, and obsession, and once they are eliminated, then life can be free and one can enter into the ideal realm, i.e., nirvana (Za Ahan Sutras, vol. 29, no.797).

Buddhism believes that everything is illusory; reality has no eternal nature; all phenomena change all the time, and the world has no eternal constant essence-this is called “emptiness”. Buddhism proclaimed that the goal of cultivating oneself is to reach desirelessness because desires would bring forth troubles and pain. In contrast, Zhuang Zi did not deny the meaning of worldly life, and tried to find happiness, contentment and spiritual freedom in life. He addressed reducing one’s desires as a way not to be restricted by the desires, while enjoying the spiritual life. However, Zhuang Zi and Buddhism both emphasize discarding insistence and removing greed.

There is a difference between the state of “Nothingness” of Zhuang Zi’s philosophy and the state of “Emptiness” of Buddhism. For example, in Zhuang Zi’s concepts, “non-desires” does not really mean no desires at all, but the negation of greed. Greed may be described as unlimited and excessive wants. “Nothingness” tries to break up our “have”, and explain the essential nature of Daoism. Eventually, there is still entity; “nothingness” does not mean real unexistence, it is not a lack of existence. This

may be contrasted with the ideals of Buddhism. The state of “non-desires” in Buddhism means that nothing can be found to elicit interest any more, because any interest could still be degraded into fascination, if one has even the least desire. Besides this, Buddhist cosmology believes that everything is temporary, not eternal; so people had better discard fixation on worldly pursuits. The ultimate state of Buddhism is “Emptiness”, in which there does not remain anything at all; this state even includes the breakup of the entity of the body. The Buddhist spiritual level is supposedly higher than Daoist philosophy.

3.5. Comparison with Western philosophies

Kenneth Lee Pike (1912-2000) was the coiner of the terms “emic” and “etic”. The “emic perspective” (microcosmic perspective) is based on the insider’s subjective view but may cause the fallacy of subjectivism, e.g., the hermeneutical fallacy of ethnocentrism. However, the “etic perspective” (macrocosmic perspective) is based on the outsider’s objective view but may cause the fallacy of “dataism” if researchers only believe in objective data or what is directly observable (Pike, 1967). That is, the etic view cannot grasp the nuances of human meaning and feeling, because these are internal subjective phenomena, though shared in social experience and communication. In this study, most concepts are based on the “emic” perspective, i.e., from the insider’s view, within the Daoist way of thinking. However, it is necessary in the context of the present study to take another view, to inspect the feasibility of Zhuang Zi’s concepts in modern

society, or even to think about cross cultural problems.

In this respect, a useful insight is offered by Benjamin I. Schwartz (1916-1999), generally acknowledged as one of the most erudite contemporary Sinologists. He regarded the ultimate philosophy as the product of different philosophers together in dialogue concerning the “problematique” as encompassed cross cultures and across time. In his view, all cultures developed independently with their own values. They should be seen from the perspective of cultural pluralism instead of the perspective of cultural relativism, which deems cultures as relatively superior or inferior. Nevertheless, no matter what the cultural context of the reading material adopted, it will be useful only if it can have an effect on the readers.

3.5.1. Zhuang Zi’s philosophy vs. Existentialism

Life in the past decades was full of stress and competition. However, the 21st century tends to be a depressed period, although there are plenty of resources for solving problems in this hi-tech society. Modern people seem to possess more instruments and conveniences for living, but people seem to be more puzzled, agitated, hurried, or even feel vacant. In this situation, people yearn to know what life we really want. What life goals are worthwhile? How can we settle our soul? How can we take care of our emotions?

As an approach to addressing these issues, existential psychotherapy is a remarkable part of the third force of psychotherapy, attempting to look at the deeper

meanings of our lives (Yalom, 1995). Person-centred therapy and Gestalt therapy are also derived from existential psychotherapy, and all discuss the issues of life meaning, freedom, responsibility, anxiety, loneliness and meaninglessness (Gould, 1993; May, 1961; Yalom, 1980). One of the originators of this approach, Nietzsche, overcome the pain of his physical weakness and loneliness through spiritual victory. He claimed the ideas of the “Will to power” and “Overman” to transcend his weakness, and to fight with negative destiny. In his book, “Thus spoke Zarathustra”, overman symbolized people who are brave in being true to self and reevaluating the meaning of life (Nietzsche, 2005). Such philosophical discussion can be efficacious in influencing clients’ belief to by pass irresistible adversity and indecisive fate.

The existential therapist, Viktor Frankl, who was Freud’s student, originated “logotherapy” as a part of existential therapy. He advocated an active search for the “Will to meaning”, i.e. that the motivation for living is based on our will to find meaning in life. This can be fulfilled in three different ways: (1) by doing a deed, e.g., reaching an achievement; (2) by experiencing a value, e.g., to love and work; (3) by suffering (Frankl, 1963). He had the experience of being tortured and abused in a concentration camp during World War II; he was deprived of all of his rights and all of his behaviour was under surveillance. In such dire circumstances, that constitute a “existential vacuum” (Frankl, 1965), while the individual is cruelly deprived of behavioural freedom, and feels empty, the only freedom that people can still possess is

to choose the meaning of their lives and their attitude towards life. This is a spiritual freedom within one's brain that no one can know of and take away.

What is the meaning of life under suffering, adversity, disease, or imminent death? Frankl (1963) suggested that one should stop asking this question. Instead, to answer this question, every unique individual has his/her life mission, and must just fulfil it in person. Frankl asked his patients who had experienced severe suffering, "How can you go through such adversity without committing suicide?" Consequently, he found that they had, all been able to find their own life meaning from suffering. For example, some lived for their lovers, some lived to seek wisdom, or some even lived to enjoy the beauty of Nature. One needs to find the meaning for one's life. The meaning of existence can evoke people's potential for transforming pain into strength of life. This is what Nietzsche meant when he said "He who has a why to live for can bear with almost any how" (Frankl, 1963, p.121).

Both existentialism and Zhuang Zi affirm the meaning of life, and emphasize the importance of keeping the spirit free, no matter how difficult life is. Besides, Zhuang Zi thought that people should return to their primary innate naive nature and are responsible for their own purity and conscience. Similarly, Frankl (1963) mentioned the importance of "responsibleness", such as responsibility for one's conscience, or one's parents, etc. People need to fulfil their life mission not in talk, but in right action. The contrasts between Zhuang Zi and existential therapy are summarized below:

Table 3-4: The contrasts between Zhuang Zi and existential therapy

	Zhuang Zi	Existential therapy
Ways of passing through adversity	<ul style="list-style-type: none"> • Transcend adversity by being optimistic and converse thinking • Accept fate without complaints • People are responsible for their own purity and conscience 	<ul style="list-style-type: none"> • Find out one’s meaning of life and life mission, which can evoke strength to overcome adversity • Suffering can strengthen one’s will to life • People are responsible for their conscience, parents, and any consequences of their actions.
Way of free spirit	<ul style="list-style-type: none"> • Reject temptation from the outward environment • Discard prejudice, and pre-judgement 	<ul style="list-style-type: none"> • Spiritual victory
Perspective of death	<ul style="list-style-type: none"> • Death and birth are part of the natural process of life • Intellectually confront death 	<ul style="list-style-type: none"> • Death makes people cherish life more and actively create life meaning.

An extreme form of existentialism, is nihilism, which advocates drifting through life; it considered life as negative, like an absurd play; no matter how one endeavours, eventually it is in vain. Nihilism is much worse than fatalism, and denies all discriminating values, or even tries to abolish corrupt social government to become anarchism.

Zhuang Zi recognized that life contains suffering and limitations, but did not deny the meaning and value of life. Instead, he advocated effort to transcend the inevitable adversity of life and set free the spirit. Also, he advised people to discard prejudice. This is not to deny the differences between things, but to avoid being bothered by them.

3.5.2. Zhuang Zi’s philosophy vs. Maslow’s theory

Zhuang Zi’s emphasis on spiritual freedom and following the natural rule is in some ways similar to the fifth and highest need, in Maslow’s hierarchy of needs, “spiritual needs”, which represent the search for self-transcendence, being in harmony with the rules of the cosmos and aware of consciousness of cosmos (Maslow, 1969); see figure 3-2. Similarly, Zhuang Zi said that the cosmos and oneself are in unity; all beings and oneself exist together. We need to be in harmony with the way of nature (ch. 2).

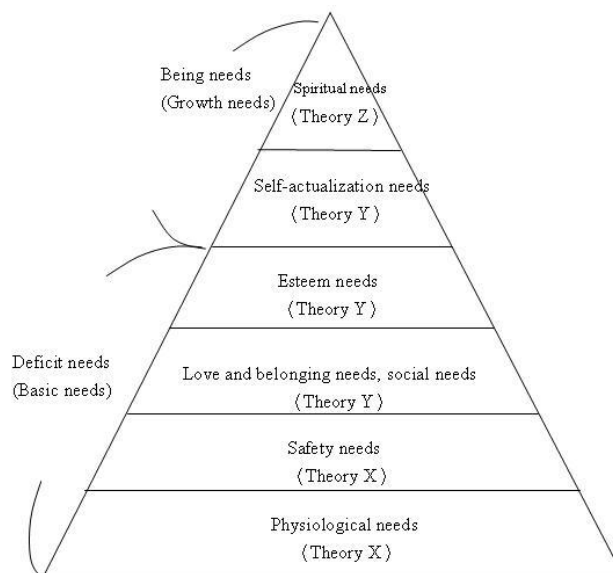


Figure 3-2: Maslow’s hierarchy of needs

Desire is the motivation for personal needs and fulfillment which everybody has.

In Maslow's Hierarchy of Needs, the top Need is Spiritual Needs (Maslow, 1969), which belongs to "Being Needs" (B-Needs) in contrast to "Deficit Needs" (D-Needs) such as Physiological Needs, Safety Needs, Love and Belongingness Needs, and Esteem Needs. However, some people find it difficult to reach the higher levels of Needs; they stay at just satisfying the basic levels. Fortunately, there are still many people who regard their spiritual life as more than just enjoyment of the senses. That is, in general people seek satisfaction not only of the basic needs (Deficit Needs), but also of Being Needs. Socrates (469-399 B.C.) said, "Other men live to eat, while I eat to live." Material pursuits are not the whole concern. In fact, the Being Needs can help us create the meaning and value of life.

3.6. Clarification of Zhuang Zi's concepts

There are many misunderstanding about Zhuang Zi's life philosophy. For example, some people may think it passive, regressive, or individualized, and so not relevant to this prosperous modern society. The goal of the Daoist philosophical life is to live a highly civilized spiritual life- Dsoists enjoy their lives, but this enjoyment does not depend on a material luxury. Some misunderstandings and disputes are clarified in the following sections.

3.6.1. Did Zhuang Zi's concepts renounce society and worldly affairs?

Chen and Zhou (2006) indicated that "Social Behaviour" is an external dimension of living, e.g., joining social or political activity. "Social Spirit" means an internal

dimension of one's value system and drives towards society. Sometimes, they are inconsistent for some reason. For example, some people with active social behaviour do not definitely have an active social spirit. On the surface, Zhuang Zi's philosophy seems to advocate withdrawal from society. Essentially, he engaged an active social spirit but acted in an unworldly manner, with passive behaviour. That is, although he did not encourage people to actively join social activities in that age, an active social spirit was reflected in his fables which he wrote to arouse people to reflect about themselves and the life. The real active social spirit does not only join social activities; the most important thing is to discuss the issue of valuing life, and helping people alleviate their suffering. He actually cared about ordinary people's lives and happiness, and addressed the general commoners.

Actually, Lao Zi never gave up worldly involvement. His philosophy proposed that one could move backward in order to accomplish progress and feel good: for example, keep a space in order to be able to fill something in; get old, then life can be renewed; under a condition of insufficiency, then enough would be added; but to be greedy would bring confusion. Thus, if one avoids being self-centred, then one's self-knowledge can be really bright; if one is not conceited in one's achievement, then one's exploits can gain sincere applause; if one avoids being arrogant with one's talent, then one's career can be firmly developed. Only when people do not fight for fame and fortune, are they safe from defeat (Lao Zi, ch. 22).

3.6.2. Is Daoist philosophy mysterious?

Some people may think that the definition of “Dao” is too abstract and ambiguous, or even unscientific. Joseph Needham (1954) tried to describe it in a scientific way without mysterious references. He regarded “Dao” as the operational rule of the cosmos, a natural curvature of time and space, expected to be value free. However, Harvard University Sinologist Benjamin I. Schwartz (1985) argued that this observation still cannot be proved in scientific research; Daoist philosophy is a kind of philosophy of nature which is different from the naturalism adopted by the scientific or physical perspective.

Daoist meditation is a process of cultivation to calm one’s mind, which is different from the Indian dhyana meditation connected with one’s inner deity. In Zhuang Zi’s “mind fasting” through meditation, tried to set aside distracting thoughts, and prejudices; the ideas is to totally empty the mind at that moment. Needham (1954) thought this meditation, practised with calmness, indifference, and value-free, can be regarded as be scientific, although it is a subjective and experiential practice, and its procedure is hard to observe and explore scientifically.

Heidegger (2002) pointed out that meditation is a state of transcending mind over language. This transcendental language does not remove the opposition of the subject and object, but the phenomenon is hard to describe concretely in words. Objectively speaking, this is filled with implications; however, one would not feel mystical if one

has experience through practice.

3.6.3. Is Zhuang Zi's philosophy passive?

This is not a passive philosophy; although it accepts the concept of natural destiny and avoidance of excessive desire, it further embraces the most courage and genuineness to go through any adversity in life. It is an optimal way to reconcile with the unpredictable aspects of life, to believe that there is justice in the operational rules of nature, and rationally accept vicissitudes as part of the process of life.

Zhuang Zi strongly rejected pursuit of power and wealth by contrived methods. Superficially, his philosophy is a mode of passivity, trying to make life goals modest. However, this is not withdrawal from society. Rather, this provides another way of activeness. For example, Zhuang Zi said, "Ancient sages first saved themselves, then they could save others. They could not eliminate villains if they did not make themselves strong (ch.4, para. 4).

Lao Zi believed the ideal nation is a small territory with a small population. This small country has speedy machines, weapons, carriages and boats, but this equipment is largely unnecessary since they are used for defence only. People feel content and enjoy engaging in their own lives, so they do not meddle with others' business (Lao Zi, ch. 80). The country provides people with sufficient basic needs, and maintains peace in society. Although this way of life has few material desires, everyone is happy and content with the highly spiritual civilization under this simple mode of living (Fang, 2000). Daoists

thought the ideal government has little need to bother civilians, and few regulations; it lets people rest and enjoy their own lives.

Zhuang Zi advocated preserving individual health, spiritual freedom, keeping in good mental condition, and being true to one's self, rather than developing prosperity for the nation. Many people may think this philosophy tends to be passive and lacks an impetus for development of civilization. However, Zhuang Zi also gave the metaphor of the roc: it endeavoured to fly high to get a wide vision, so it could fly to the far south. Such approval of life value and looking for a better life is another process of self-fulfilment and an active perspective on life.

3.7. Modern application of Zhuang Zi's concepts

In this current technological society, most people own more resources and have more convenient access to more facilities than ever before in history, but they are under pressure to be even more efficient and hard-working to meet competition. This is especially the case for college students, at a difficult stage of transition into independent adults. They may feel stressed because of confronting heavy schoolwork, but they also need in the near future to jostle through the narrow gate of access to employment in popular jobs. Even if they graduate, it does not guarantee a stable job because many offers are for one-year contracts or insecure renewable contracts. How can one live well in such an uncertain and stressful situation? In preparing this study, I considered my own experience with students that needed to be helped. Zhuang Zi's concepts may

provide an effective alternative to reflect on these life issues and insights gained from his examples.

3.7.1. The reasons for selecting Zhuang Zi's fables as the reading material

Zhuang Zi's fables may be a good way to make individuals in Taiwan's society, with a general Chinese cultural background, feel it is easy to discover the roots of one's trouble, decode doubts, and reflect on one's value system. The reasons why Zhuang Zi's fables were suitable to be used as reading materials in this study are based on the following characteristics:

- The participants in my study were all Taiwanese college students who were more familiar with the culture of native works, such as Zhuang Zi's fables, than with Western classics.
- Zhuang Zi's fables include a range of metaphors that allow students space for interpretation and discussion. This can provide alternative perspectives, or help readers to project themselves onto the story characters. Thus, the ways of problem solving would not become rigid, and many possibilities would be presented.
- The length of each fable is short, which can prevent readers from getting bogged down in frustrating or irritating content, which could make them impatient, or cause them to give up reading. Preaching by didactic readings is not effective.
- Focus on one book is more systematic and complete in philosophical content than selections from different readings.

- Zhuang Zi's fables mostly teach how to pass through impasses, calm one's mind under adversity, explore the values of life, and search for spiritual freedom, all of which seem to facilitate coping with stress.

It is not easy to understand ancient Chinese classics with diverse interpretations through many dynasties' translation, especially as Zhuang Zi uses implication and metaphor to discuss how to go through adversity. Therefore, it is better to proceed with illustration and discussion. Otherwise, these writing could often be open to misunderstanding or even elicit a negative appraisal. Thus, there is a large body of later writing that interprets the meanings of Zhuang Zi's fables.

3.7.2. The criticisms of Zhuang Zi's concepts

Due to some traits of Zhuang Zi's philosophy, there are several points in it that are unpopular in current society, especially for rulers and entrepreneurs, who consider it to express an opposing view, or to be more high-sounding talk, then criticize it as promoting passive or regressive thoughts. Indeed, understanding Zhuang Zi's message is all the more difficult in a culture which places strong emphasis on efficiency and achievement. The general criticisms are categorised as below:

- Not caring about overall national development and social responsibility, as Zhuang Zi's concepts tend to be more individualised.
- Not beneficial for economic development, due to the appeal to reduce desires
- A lack of opportunity to stimulate one's potential, e.g., training in extreme sports,

due to the idea of forgoing demands.

- Lack of motivation for advancement, because Zhuang Zi advocates avoiding competing with others in certain contexts, e.g., beauty contests, football games.
- A danger that people would be prevented from fighting for rights because he advocated living in the natural way, i.e., go with the flow, which people perceive as lazy, unambitious and fatalistic
- Ignoring the social support system and intimacy
- Over idealistic, as it urges people to reach spiritual enrichment, but it is hard to achieve this because human nature is greedy and indolent.

Even though Zhuang Zi's philosophy does not promote the political power and economical development of the country, his concepts are beneficial for personal cultivation, mental hygiene, stress coping and having a carefree life, especially in such a high-tech society that disregards humanity, is concerned with profit, filled with commercial and materialistic culture.

3.8. Summary

The readings selected for the intervention reported in this research were selected fables of Zhuang Zi, which reflect Daoist philosophy. Daoism is often referred to ambiguously in a way that encompasses both Daoist philosophy and Daoist popular religion. In fact, Daoist philosophy was established earlier than Daoist religion by over six hundred years. The

popular religion involves a pantheon of traditional deities and spirits in a hierarchy similar to the bureaucracy of the Chinese empire. It includes gods of war, wealth, scholarship, etc., to whom people pray for personal gain. In its original form, Daoist philosophy challenged mainstream social values of prestige and wealth accretion, and encouraged people to live a carefree and simple life, in which spiritual enjoyment is more important than material satisfaction.

Zhuang Zi's concepts are categorised in this study as follows: (1) Discarding Prejudice; (2) Removing Greed; (3) Forgoing Demands. Seemingly, Zhuang Zi's concepts are passive and forbidding, such as forgoing one's insistence, and those include the concepts of not fighting for something and not confronting an opponent with toughness. However, the premise of Forgoing Demands is only applicable when one is under the situation of an irresistible/uncontrol situation, not a trivial situation; one needs wisdom to identify the right time to go further, and one also needs a way out for retreat from a disadvantageous outward limitation.

Having provided this background on the choice of readings for this study and their cultural meaning. I now turn in chapter four to an explanation of the research design in which the selected readings were used with college students.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1. Research questions

Current college students feel more stressed than before, not only due to loadings of school work, but also manifold personal issues. They are involved in more activities outside school, such as part-time jobs, have family conflicts with remarried parents, or even fight to win TV competition shows. Therefore, to explore the feasibility of reducing college students' stress is the objective and importance of this research.

From the earlier literature review in Chapter Two, it is shown that bibliotherapy can be effective in reducing stress in the environment of both educational and hospital settings. In the context of a Chinese cultural setting, the philosophy of Zhuang Zi is well known as one which cultivates a naturalistic, non-materialistic life ethic, eschewing immersion in the acquisition of worldly possessions and accolades. His concepts might be suitable for drawing people back from stressful or competitive situations.

4.2. Research paradigms

Kuhn (1962), in his book *The structure of Scientific Revolutions*, did not give an explicit definition of paradigm, which resulted in much controversy about its meaning. However, in 1970, in his 2nd edition, Kuhn defined "Paradigm" as is a scientific thinking complying with the unified knowledge established by the numbers of a "scientific community" Objectivity is formed by "intersubjectivity" which adjusted by each

scientist's subjectivity. Later, paradigms were divided into two major types: one is the scientific paradigm which emphasizes empirical, observable, objective, nomothetic research, and tries to establish the laws and theories of natural science. The other is the humanistic paradigm which emphasizes holistic, interpretive, subjective, idiographic research (Husen, 1988). However, the field of the humanistic paradigm seems to be very complex and varied, and it has generated many other paradigms such as the hermeneutical, phenomenological, or critical paradigms.

4.2.1. Quantitative approach vs. qualitative approach

Social science research tries to address issues related to human beings in three domains: (1) Ontology: this is relevant to metaphysics which explores the essences and types of existence, such as monism (idealism vs. realism), dualism (i.e., the mental and material exist independently and interact with each other), and ideo-materialism (i.e., the mental and material overlap). What forms of our mind exist? Objectivism holds that social phenomena, as external facts and their meanings, exist independently from the social actors, and individuals are unable to influence them. Constructivism holds that social phenomena and their meanings are continually being constructed and revised by social actors. Each individual can present his/her own vision of social reality and knowledge is regarded as indeterminate. (2) Epistemology: this is concerned with how we can know the outside world. Do we gain knowledge through rational thinking or perceptual experience? Can we identify what is true or not? How do people think? What

counts as knowledge? How can knowledge be acquired? The two schools of thought here are positivism, which assumes that knowledge comes what can be seen or proved rather than speculation; and interpretivism, favoured by social scientists, which tries to grasp the subjective meanings from individuals, and understand causal explanations interpretively. (3) Methodology: How do we know the world? How can we find the answers? The above can be summarised as follows:

Table 4-1: The contrast between quantitative and qualitative research

(Bryman, 2004, p.20)

Considerations	Quantitative research	Qualitative research
Ontology (types of existence)	Objectivism	Constructivism
Epistemology	Positivism (Natural science)	Interpretivism (social phenomena)
Methodology	Deductive approach: testing theory, theory guides research (Theory→observations, propositions)	Inductive approach: generating theory, theory is an outcome of research (Observations→theory)

There are many differences between quantitative and qualitative research. For instance, quantitative research tends to be used in larger scale studies to try to establish reliable cause-and-effect relationships and identify general laws, rather than trying to discover the potential causes with less concern for reliability, which qualitative

researchers seek to do. Many criticisms and challenges have been raised against qualitative research. For example, qualitative researchers have been called journalists or soft scientists. Their work is termed unscientific, or only exploratory, or entirely personal and full of bias. It is called criticism, and not theory, or it is interpreted politically, as a disguised version of Marxism, or humanism (Denzin and Lincoln, 1994). In contrast, positivists have been strongly criticized as standing on the prime position of western civilization and believing that the “truth” can transcend opinion and personal prejudice (Carey, 1989). However, in practice, it is very difficult to completely break away from human subjectivity.

Quantitative researchers are committed to a positivist approach to the study of society (Filmer et al., 1972). They only conform to the canons of scientific method and natural disciplined procedures. They belong to the scientific paradigm and believe that there is only one objective reality out there to be studied, as positivists asserted. However, postpositivists think that reality will never be completely captured, only approximated (Guba, 1990). Apart from this, there are still many other problematic issues to be addressed, such as how can objectivity be achieved? Do observable data appear superficially without profound meanings?

Despite the long-standing debate, more recently it has been suggested that it is unnecessary to argue the superiority of the quantitative or qualitative approach; instead, collaboration between both is possible. Multiple methods may be used in a single study

in order to avoid one method's inadequacy, especially when investigating complex issues. For example, researchers combine the use of narrative, content, discourse, archive, and even combine statistics (Nelson et al., 1992). In addition, Jick (1979, p. 602) thought "qualitative and quantitative methods should be viewed as complementary rather than as rival camps". For example, when Woods (1979) conducted ethnographic research on a school, for the sake of preciseness, he included a survey of parents to add some survey evidence, especially related to participants who were not accessible through the focus group.

Based on epistemological tradition, quantitative and qualitative research are derived respectively from incommensurable standpoints about how social reality ought to be studied. However, these two approaches can collaborate in the technical tradition. "The technical version of the debate much more readily accommodates a marriage of the two since it acknowledges the respective strengths and weaknesses of the two approaches as methods of data collection" (Bryman, 2001, p. 126). Nowadays, quantitative and qualitative researchers have more readily accommodated each other, although both approaches have their respective strengths and weaknesses. Due to some prevailing constraints, only quantitative analysis is adopted in this study, and qualitative research would be recommended as a further study. The reasons for implementing the quantitative approach are explained in detail in the next section.

4.2.2. The reasons why quantitative research was adopted in this study

The main difference between quantitative and qualitative research is that the former seeks breadth by specific investigation of large samples, while the latter seeks depth with more open investigation of smaller samples (Patton, 1990). Quantitative approach has more scientific credibility in research, for example, components can be statistically analysed objectively, it is easy to compare the differences between individuals and groups, and findings can be generalized as samples are drawn from a larger population.

Since Chinese Zhuang-Zi fables have never been used for bibliotherapy, broad exploration of quantitative research is necessary and a priority. The advantages of adopting a quantitative approach in this study are as below:

***High reliability and representativeness** (consistency, replicability):

Applying Zhuang Zi's fables to bibliotherapy is an exploratory study, and there is a lack of sufficient supportive research to empirically prove its effectiveness. Quantitative research is based on the objective views of a large-scale group of respondents, and so can be regarded as reliable and representative.

***Good generalizability:**

It is possible statistically to analyse the components objectively and generalize the findings. It is easy to compare the differences between individuals and groups. This study is aimed to inspect the applicability of bibliotherapy for stress reduction

for college students in general, rather than special cases. Therefore, numerical data was most suitable to meet this research objectives.

***Economy:**

Quantitative research consumes less time and money. Usually, quantitative research employs questionnaires which allow a large number of participants to be covered simultaneously, which saves time and money compared with qualitative research. It is feasible to employ questionnaires if large-scale samples are required for analysis purposes.

4.3. Research hypothesis

Zhuang Zi's philosophy has been preserved in a canon of short fables. Regarding utilization of the works of Zhuang Zi for an experiment in bibliotherapy at a school, the research hypothesis is as follows:

“Applying bibliotherapy with Zhuang Zi's fables can bring significant reduction in stress levels for college students in Taiwan.” That is, the level of stress reduction should be the highest for Gp 1, and lowest for Gp 3, with Group 2 is the middle.

The reason for this is that in the research design, the treatment variables are weighted regarding level of exposure to bibliotherapy across the three experimental groups. Gp 1 with full treatment exposure to bibliotherapy should experience the most effective stress reduction compared to Gp 2 with reduced treatment exposure and Gp 3 with no treatment exposure, and Gp 2 should be more effective in stress reduction

compared to Gp 3.

Gp 1 (Bibliotherapy experimental group): full treatment exposure, i.e., reading assignments, explanation, discussion.

Gp 2 (Self-help experimental group): reduced treatment exposure, i.e., reading assignment.

Gp 3 (Control group): no exposure

The main hypothesis in this study should be concerned about prediction and the control of stress levels. However, some analyses are conducted to confirm this hypothesis, for example, regarding the level of stress reduction in relation to demographic differences, or interpersonal behaviour types.

4.4. Research design

“Research design”, is not just a work plan for collecting and analysing data, but is the logical structure of inquiry, including identifying plausible rival hypotheses and finding some evidences consistent with the theory (De Vaus, 2001). Research design is a conceptual framework for planning and executing a research project, from identifying the question through to validly interpreting and publishing the results. It should indicate what questions will be investigated, who will be studied, what tools and procedures will be used, and the strategies used to analyse data. This shows why it is important to think clearly about the research objectives and the way in which they will be investigated.

Regarding the research purposes, Cronbach and Suppes (1969) indicated there are

two types of research: (1) conclusion-oriented, the purpose of which is to establish theory, and (2) decision-oriented research, where the purpose is for application in practice. This study belongs to the latter type. This study involves confirmatory research, which is to verify an existing theory (bibliotherapy). However, the fables of Zhuang Zi have not been used as the reading materials so far. Thus, this study can also be considered as a piece of exploratory research.

Bibliotherapy with Zhuang Zi's fables can be an optimal choice in the educational settings as it can be performed on a large scale and over a short period, which is cost-effective. Before intervention (bibliotherapy), all three groups were given the pre-test of the "Philosophical Belief toward Stress Coping Inventory, PBSCI", "Stress Level Scale", and a survey of their demographic information. Also, they took the same tests again as the post-test after 12 weeks. The effects of the bibliotherapy readings on stress levels were measured through pre-tests and post-tests on all participants. However, a questionnaire can be administered to collect data by different approaches, such as individual/group face to face administration, postal questionnaire survey, self-completion questionnaire by internet, survey on the street, or a self-administered questionnaire completed by a whole class under the supervision of the researcher. In this study, the last approach was adopted because of the nature of the experiments.

At the outset of analysing all data, it was necessary to identify their representativeness, and identify if the structure of the samples is close to those of the

population, i.e., inspect whether they can represent the real distribution of the population. First, all the raw data were coded into computer readable data, reversely scoring the reverse items, the total scores were calculated, then, invalid questionnaires which had a few missing values, identical answers, or improper answers (i.e., reverse questions were neglected) were discarded. Then, chi-square statistics were employed to analyse whether demographic differences come from similar distribution of population; also bivariate analysis was conducted to analyse any correlations between two dimensions of nominal variables. This was followed by analysis of the pre-test stress levels in terms of demographic variables, in order to check whether any significant bias existed before the experiment.

It was necessary to identify the pre-test stress levels, and levels of agreement with Zhuang Zi's concepts, to see if they were equivalent across groups prior to treatment, then, inspect any significant differences among groups in the post-test after bibliotherapy. Later on, the effects of stress reduction were verified by analysing the differences between the pre-test and post-test through t-test procedure. The analysis of the 343 valid cases showed a significant effect in stress reduction through bibliotherapy with Zhuang Zi's fables.

Moreover, Pearson correlation analysis was used to identify any correlations between the agreement levels of Zhuang Zi's concepts and stress reduction levels. Also, regression analysis was performed to predict whether any factors can influence the

levels of stress reduction. In addition, IBS was employed as auxiliary instrument to confirm the effectiveness of bibliotherapy. Finally, possible impacts from demographic variables in the results of stress reduction were explored.

4.4.1. Quasi-experimental research design was adopted in this study

In the setting in which my study was applied, it would be difficult to group participants randomly into new classes. Instead, quasi-experimental design was adopted, in which the groups already existed.

In a quasi-experimental design, participants are not assigned randomly into experimental or control groups, which is the main distinction from true experimental design (Campbell & Stanley, 1966). There is a lack of representativeness and one cannot infer universality due to non-random assignment to the experimental group. Although assigning participants randomly in a psychological laboratory experiment is a good way of controlling the conditions of participants, it is difficult to generalize results obtained in the lab to real-life settings. In other words, the results that come solely from the lab cannot give a full picture. Instead, a quasi-experimental design is more appropriate because there is less control of the participants and also the findings can be replicated in real-life settings (Heppner et al, 1992).

In contrast to the true experimental design, in the quasi-experimental design it is hard to control many threats to internal validity that could affect the causality between independent and dependent variables (Cook & Campbell, 1979) . Inevitably, it is hard to

control all latent variables which are much more complicated in sociological research.

Internal validity (causality) is a causal relationship between independent and dependent variables, and it is important to make sure it is not generated by confounding variables. This needs a control group for comparison. Apart from the experimental treatment, there might be other factors making participants change, such as confounding variables which could interfere with validity, for example, extra school work, history, a personal commemoration being celebrated or significant events happening between pre-test and post-test. “Maturation” is another threatening factor, but it would be less salient in this study because the experiment only took three months. Participants would not change a lot in physical and mental development during such a short period.

4.4.2. Experimental design

Through integrating the review of the literature, the effects of bibliotherapy are probably influenced by at least three factors: (1) Contents of reading. (2) The kind of therapeutic activity, that is, whether the reading takes place with /without reinforcement by discussion. (3) Participants’ traits. This research sought mainly to verify the first two factors. The last factor, students’ traits, would be difficult to change and control. However, participants can be deemed as homogenous groups, because the freshmen of the Institute of Technology are admitted on the basis of scores in the national college entrance examination, and the entry criteria of all departments are quite similar. Also, students’ nature is assumed to more similar to each other than to students in other fields,

due to their technological education, training and cultivation.

The research framework of this study is based on a quasi-experimental research design involving ready groups, i.e., Chinese literature classes in a technological college. It was divided into three groups of three classes each. Each class was composed of students from a particular department, i.e., the nine classes represented nine departments. Each class was assigned to the research group according to the availability of their time schedule to allow them to complete the whole 12-week course of bibliotherapy sessions. In this study, Group 1 included the departments of communication engineering, information management, and marketing and distribution management; Group 2 included the departments of electronic engineering, industrial management, and health care administration; Group 3 included the departments of mechanical engineering, electrical engineering, and materials and textiles.

For Group 1 (the bibliotherapy experimental group), the most thorough form of bibliotherapy was applied: student reading assignments, analytic explanation by the teacher with provision of contemporary examples and parallels, and student discussion. For Group 2 (self-help experimental group), a less thorough form of bibliotherapy was employed: student reading assignment only, without further illustration and discussion. For Group 3 (control group), no intervention was applied; the class readings were just standard essays of classical and modern Chinese literature, and did not include readings from Zhuang Zi's fables. The research conceptual framework is described in greater

detail as follows:

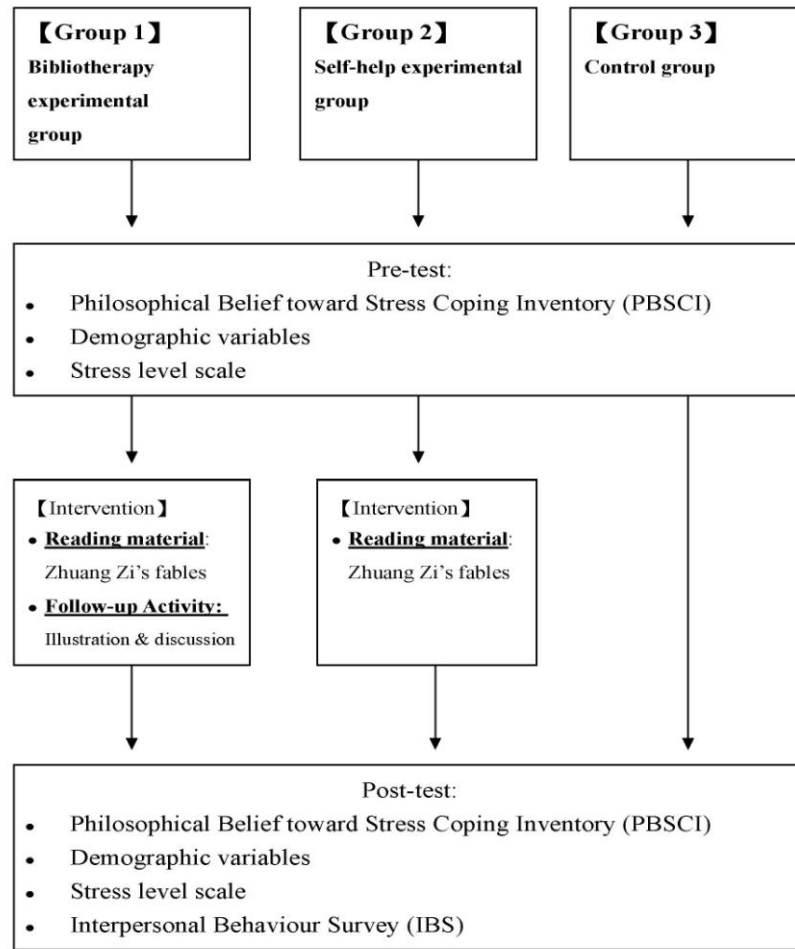


Figure 4-1: The flow chart of experimental design in this study

4.4.2.1. The specifications of activity in three groups

For all classes, the standard textbook was *Chinese Literature Selections for Freshmen*, a large book encompassing a wide selection of reading from ancient to modern times, including short selections from the classical Chinese philosophers. Teachers were given considerable latitude in choosing the particular selections for assignment for each class. Instruction was given once a week, two hours per session. Each class had about 50 students. Since all students were in Chinese literature classes,

the bibliotherapy was applied as a common variation of the class content.

For Group 1, in which bibliotherapy with Zhuang Zi's philosophy was applied, a popular cartoon book that illustrates Zhuang Zi's fables was utilized, one fable for each session, along with handouts illustrating modern application prepared by the researcher. The fables plus handouts were expected to be read by the students as an assignment, and discussed in class in the following session.

Group 2 was given the readings from Zhuang Zi's fables, but there was no discussion of them in class. To make sure the students actually read the materials, both Group 1 and Group 2 were asked to submit a report on their reflections on Zhuang Zi's fables after the twelve weeks, and there were also some questions concerning Zhuang Zi's thoughts in the final examination.

Group 3 followed only the standard curriculum for Chinese literature classes, with the usual variation in assigned readings according to the teacher's choice. The covariates of these three groups, such as age, and IQ, were controlled well as their scores in the entrance examination were in the same range. The specifications of these three groups are summarized below:

Table 4-2: Specifications of the three experimental groups

	Group 1: Bibliotherapy group	Group 2: Self-help group	Group 3: Control group
Classes assigned to group	Three freshman classes taught by the researcher	Three freshman classes taught by the researcher	Three classes assigned randomly from those in the freshman year, but taught by other teachers
Number of participants	136	103	104
Pre-test	✓	✓	✓
Reading assignment	✓	✓	×
Follow-up activity (illustration and discussion in class)	✓	×	×
Post-test	✓	✓	✓

4.4.2.2. The procedure of bibliotherapy with Zhuang Zi's fables

Bibliotherapy was applied using the popular Chinese cartoon edition of Zhuang Zi's fables (Revised Zhuang Zi's fables from Tsai, 1986, 1993, 1999, 2003; Luo, 1999).

The teacher provided one fable with the original text in ancient classical Chinese, and a translation into modern expository Chinese, and handouts at each session, in order to impart deep understanding of the implications of the fables, which students read at home.

In class, the teacher interpreted the theme of the fable, and extended the lesson of the relevant fables, and the issues in modern application of Zhuang Zi's thoughts. Later, students were directed to form small groups of five persons and exchange their views and opinions on the questions posed at the end of the handout. During about 15 minutes of small group discussion, students shared experiences to see if they had applied concepts in the fables to their own problems before, or shared personal opinions as to see whether the concepts would work or not. In order to stimulate brain storming and to avoid silence in discussion, the researcher went to the group and raised questions when the members were discussing listlessly or were stuck, and also listened to the members while they were talking freely. Fortunately, each group leader could often grasp the essence of Zhuang Zi's fables, follow-up the questions in more depth, and successfully return to the topic when the group strayed outside the theme. Also the members clearly and fully exchanged their opinions.

Then, an elected group representative from each group presented the groups' opinions, and further discussion proceeded from that. Finally, a conclusion was drawn by the teacher. This constituted the first hour of the class for Group 1 for twelve weeks, and the second hour covered the standard Chinese literature curriculum. The following flow chart is the procedure of the bibliotherapy group:

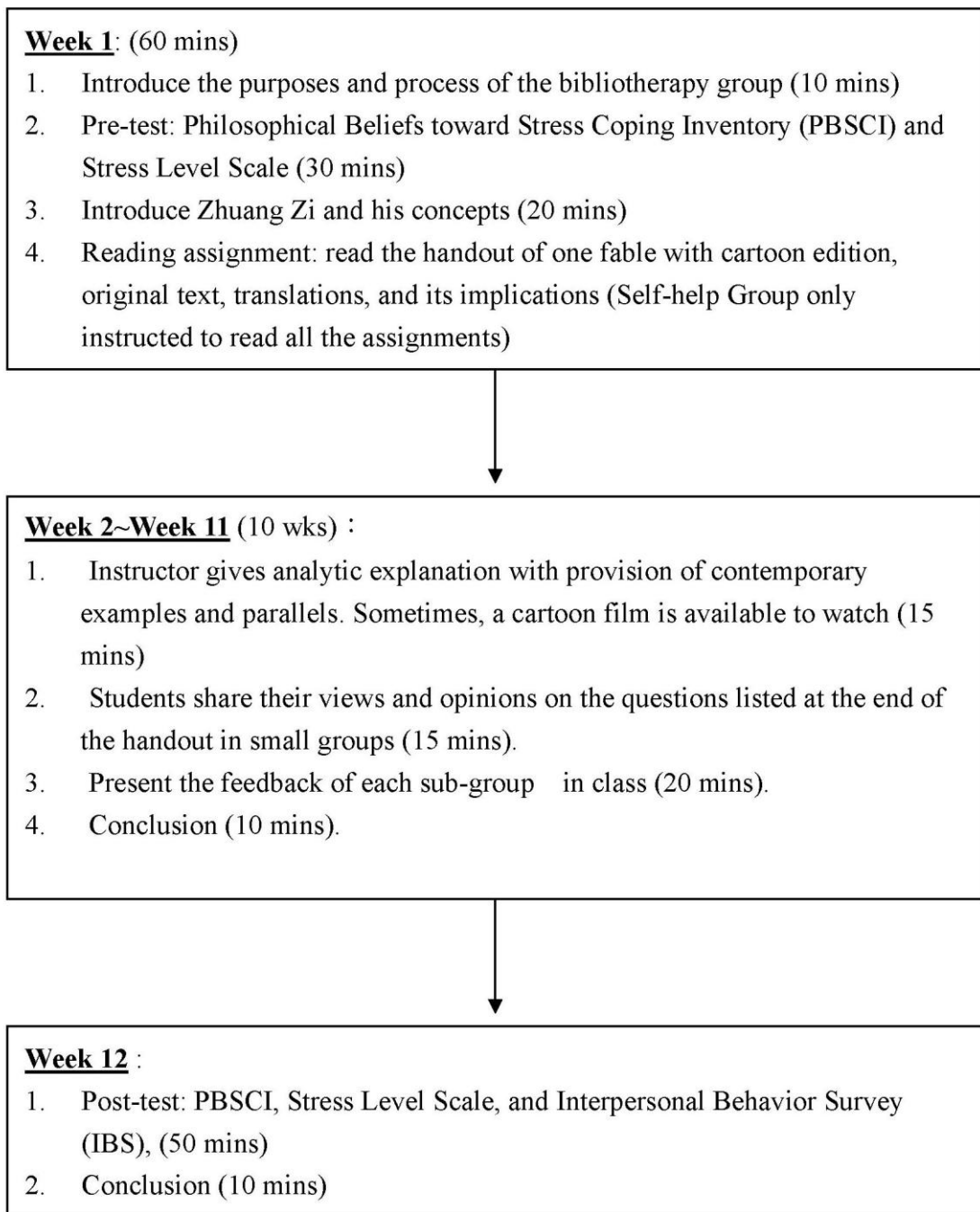


Figure 4-2: The procedure of bibliotherapy group

4.4.2.3. The role of the instructor

Because different researchers would bring about systematic error, who would be on appropriate candidate for administering the bibliotherapy and testing? Punch (2000, p.104) indicated, “If it is a choice between the researcher administering the

questionnaire and somebody else on the researcher's behalf, the former is better". This is because the researcher is familiar with the data collecting procedures and facilities. Also, the questionnaires can be administered under the researcher's supervision, so there would be less risk of the problem of a low response rate. Another reason for administration by the same researcher achieve "constancy of method", as the researcher's attitude can be kept as consistent as possible in dealing with different groups at different times. In sum, the best way was for all the tests to be carried out by the same person.

The researcher maintained a low tone to remove appear less authoritarian, took the role of an observer and listener during group discussion, and did not break the group processing, and retained confidentiality about groups. Proceeding with interpretation and discussion can potentially bring out solutions or unexpected alternatives for problems. Heidegger (1959) indicated that interpreters can unfold the "unthought" meaning that the author had not explicitly articulated. Gadamer thought the process of hermeneutics can render different voices as a dialogue between interpreter and context (Risser, 1997). This kind of interaction is a powerful dynamic in group therapy.

Moreover, the group leader was not a inquirer, but a mediator coordinator. The aim was to help each member have an opportunity to interact with others as much as possible. Also, the leader summarized notes briefly, and drew the members back when the discussions strayed from the topic, allowed each member to share before the end of

group, and controlled the time for each member in discussion.

4.4.3. Ethics in counselling research

It is necessary to consider carefully some ethical problems, especially in an experimental design, in order to avoid hurting the participants physically or psychologically. So, what is importance of ethic in conducting research with human participants? In America, the Department of Health, Education and Welfare, DHEW (1971) published the book *Guidelines for the protection of human subjects* to highlight the importance and specifications of dealing with human subjects (Haimson & Elfenbein, 1985). The American Psychological Association, APA (1982) proclaimed that psychologists should consider the participants' dignity and welfare, and take responsibility for complying with ethics from the moment they decide to conduct research with human participants until the end. The American Association for Counselling and Development, AACD (1988, D,3.8) also asserted the significance of the participants' rights. Sim (1989) pointed out that ethics in research is a conceptual frame that permeates almost every research process. For example, researchers may be more powerful and authoritative than some vulnerable groups, and students may feel forced to take part in research projects. It is crucial to know how to prevent the exploitation of vulnerable groups if research relationships are unequal. Thus, the researcher needs to be very scrupulous in respecting and protecting the participants.

According to Kitchener (1984), both practitioner and researchers should consider

the following five principles of ethics about clients' deserved rights, set out his model of ethical justification, which are autonomy, nonmaleficence, beneficence, justice, and fidelity. Sim (1997) also pointed out similar ethical principles: beneficence, nonmaleficence, autonomy, respect, and justice. These categories need to be reviewed carefully when doing research in order to guarantee clients' rights and welfare.

Regarding the issue of "intentional deception", Shaughnessy & Zechmeister (1990) argued that it is necessary to conceal the meaning of research in order to make the subjects behave as they normally would. However, this would fall into "intentional deception", by concealing research information and confederate manipulation in order to recruit the participants (Baumrind, 1985). It involves deceptive conduct, no matter if it is intentional or unintentional. Any type of deception makes the helping relationship distrustful and violates the right of informed and voluntary participation. In the worst instances of deception, such as placebo control group design, the researchers should use some remedial measures such as providing a course of debriefing to clear any misinterpretation and explain the reasons why deception was necessary (Adair et al, 1985).

4.4.4. Dual relationship of ethical dilemmas

The dual roles of therapist and researcher could raise conflicts and ethical dilemmas in implementing research on one's own students. The researcher-teacher dual relationship is much more complicated than the above relationship. For example, when

signing the informed consent, the clients may seek to please the researcher by display false cooperation, or helping the researcher to fulfil his/her project. This may also cause conflicts between therapeutic and research roles. Moreover, the relationship between therapists and clients should be a “therapeutic alliance”, the goal of which is to do something beneficial for clients; however the intention of the “scientific alliance”, the relationship between researchers and participants, is to collect data and strive to contribute to new knowledge (Stricker, 1982).

4.4.5. The ethics practice of this study

There is no institutional review board governing research at my college. However, the research project was discussed in advance with the several teachers teaching the freshman classes. The content of this bibliotherapy intervention is a part of education in the standard Chinese classics; the teacher can put particular materials into this curriculum for the purposes of beneficial learning and personality development.

The intervention of bibliotherapy in this study was not a device for manipulating individual behaviours or inducing motivation other than that normal in the classroom. The design of this study was intended to create an instruction or growth group to improve individual ability in problem solving, while minimizing the risk of evoking unpleasant or irritating feelings in participants. Nor were the feelings of the participants exploited by the

researcher. The bibliotherapy addressed general issues expressed in parables, and did not involve any individual revelations by the students.

In order to prevent participants from harm by any psychological, social, or emotional invasion during the bibliotherapy, some cautions were considered. First, a common concern is that interpersonal interactions may be the decisive factor in group dynamic processes. An undesirable situation could occur that some participants might be shy to express their opinions; some participants with competitive habits might be conceited and less tolerant of different opinions, or give little respect to others. Such situations can be dealt with skilfully by assigning a collective task to improve members' cooperation and group cohesiveness, empathy can be induced as well. However, no such problems emerged in the process of this research.

Second, there was a concern to prevent a reaction in which the participants might perceive themselves as having been evaluated in this experimental condition. That is, some individuals might pretend to be the best, or feel stressed if not the best. Third, the more contradictory situation was that the researcher was also their teacher in class, and this could involve an ethical dilemma in the dual relationship. The researcher affirmed that her standpoint was neutral, and the psychological testing contained that nothing would affect students' grades.

The important thing was to honestly tell the participants the purpose and steps of this study in order to gain their consent and authentic cooperation. Psychological testing was a necessary measure to help the researcher to objectively understand any impacts from the participants' involvement. Participation in the experimental groups did not involve any additional burden on the students beyond normal classwork. Reading the brief fables for homework was only a fifteen-minute exercise.

4.5. Target population and sampling issues

The target population of this study was college freshmen in Taiwan. The reason for choosing college freshmen is that they might feel stressed in confronting the transition to adulthood and various life challenges ahead. Nowadays the roles of college students in Taiwan are more varied than before. Most of them are not simply students, but may have other social roles. Also, members of this age group typically flirt with fashions in social activities and culture. The problems brought by student clients to the school counselling centre show they face stress from schoolwork, interpersonal relationships, or generation gaps, feel competitive and uncertain about their career, or insecure future, or may suffer insomnia. These are the main reasons they seek help.

Sampling plays an essential and fundamental role, as the way of sampling critically influences accuracy and can cause errors in the research. There are two main types of sampling, probability and non-probability sampling. Their differences are

briefly distinguished and their respective significances identified in the following descriptions (Bryman, 2004):

4.5.1. Probability sampling

The merits of probability sampling are that it is possible to make inferences and to generalize findings from samples to the population. Probability sampling can be divided into five main types:

- A. Simple random sampling: the probability of each unit/individual within the population being selected for the sample is equal. Participants are chosen by listing the whole population and picking random numbers by using a table of random numbers. This kind of sampling is not feasible if the population is huge or displays remarkable heterogeneity.
- B. Systematic sampling (internal sampling): e.g., start with the 1st name on an alphabetical list, or choose the same last digit number, such as 7,17,27.
- C. Stratified random sampling (proportional sampling or equal allocation): it is appropriate to use proportional sampling when the population is large, where subgroups' weight can reflect the composition of the population, to avoid either over or under-representation of any subgroup. However, equal allocation can be used when the population is small. The samples should be heterogeneous between strata (subgroups) and homogenous within each subgroup. For example, a sample might be stratified by educational level, where the subgroups may be high school,

undergraduate, and postgraduate, or stratified by residence area, such as city and suburb.

D. Cluster sampling: samples are drawn from widely dispersed units. The samples should be homogenous between clusters, and heterogeneous within each cluster, eg., clusters could be classes in the same school.

E. Multi-stage sampling: a random selection is made of the organisational groupings where the people are clustered, then selection made within the group. However, random assignment is not always a fair and workable approach, especially regarding ethical and practical considerations. For example, it would be unethical in studying the relationship between smoking and diet, to randomly select members of the public including non-smokers, then randomly assign them to one of three experimental groups: heavy smokers, moderate smokers, and non-smokers deemed as the control group. Generally speaking, random sampling is the optimal condition in terms of reducing sampling error, but sometimes it might be not feasible because of lack of enough manpower and resources to select randomly from a whole country or a whole city.

4.5.2. Non-probability sampling

Where random sampling is not appropriate or feasible, there are some non-probability sampling techniques, whereby participants are selected according to certain criteria. Non-probability sampling is described as follows:

A. Snowball sampling:

The researcher makes initial contact with a small group of people who are relevant to the research topic, then finds other recruits through the mediation of the initial sample. Just like a snowball, the more it rolls, the bigger the sample becomes. This kind of sampling is not suitable for quantitative research, since the samples are unlikely to be representative of the population, and there are problems of low generalizability and external validity. However, it is suitable for special and rare research groups, such as an AIDS group,

B. Quota sampling (similar to stratified sampling, but without randomizing):

This involves selection of a sample that reflects the population in different “control characteristics” (known as quotas), such as gender, ethnicity, age, socio-economic groups, or region of residence. It is similar to stratified random sampling, but not performed randomly. Usually, quota sampling is applied in commercial marketing research or political opinion polling. Quota sampling is cheaper and quicker than an interview survey on a probability sample. Also, it avoids the need to keep calling back on interviewees who were not available the first time. Therefore a quota sample is much easier to access. However, it has some shortcomings. For example, it has a lack of representativeness, the interviewer may have a bias resulting in incorrect judgement, or the interview setting may not typical. i.e., human judgement would affect the selection process and there is a lack of objectivity.

C. Convenience sampling

Sometimes, it is hard to adopt random selection of samples due to constraints of time, resources and costs. Thus, we can employ convenience sampling with existing groups which are available in the target population, instead of sampling randomly. However, the convenience sampling has some weaknesses, for example the trap of reductionism through inferring the results to the general population from specific and dispersed non-random samples, failure to calculate the sampling error, and lack of representativeness and generalizability. Despite these issues, the research can still make a contribution to knowledge.

In this research, the convenience sampling approach was adopted for several reasons: (1) Accessibility: it was a good chance to conduct the experiment at my teaching college. Bryman (1989) indicated that convenience sampling is very common, more eminent than probability sampling, especially in the field of organization studies. (2) By working with existing classes, without redistributing students, class members would be familiar with each other, so that the atmosphere of the class would be more natural and secure. (3) Covering all college freshmen in the country would be beyond the facilities and resources of a research student. Thus, this study focused on the accessible population of college freshmen in the college where I teach. This study required 12 treatment sessions, which would not be easy for teachers to arrange in class. Fortunately, I had six classes taking the general course of “Chinese literature” for

freshmen. Three of these classes were taken, by drawing lots, as the bibliotherapy experimental group (given reading materials, instruction, and follow-up activity); the other three classes were the self-help experimental group (given reading materials only). Then I randomly selected another three classes from the rest of the freshmen classes, who were deemed as the control group. In order to reduce the number of extraneous variables, it was preferable that all the instruction classes should be guided by the same teacher, because different teaching styles or personalities would give rise to different discussion even under the same procedures. Another consideration was to avoid having the class go out of control. I therefore instructed the class, because I knew them better than a lecturer assigned provisionally would do.

4.5.3. Sample size and sample bias

A larger sample size is conducive to decreasing sampling error, i.e., the precision of sampling would improve. The increase in the sample size cannot guarantee precision, but it helps to maximize it. “How large should the sample be?” There is no absolute right size of samples. Sample size is decided by the conditions of the research, such as the research purpose, manpower, time and cost. Also, how much sampling error can be tolerated? What level of precision is expected? Gay (1987) suggested that the sample size should be at least ten percent of the population, but if the population is small in descriptive research, twenty percent is preferred. A sample of over 30 is needed in correlational research, and an experimental research also needs at least 30 participants,

because if the sample size is too small, it could be hard to identify significant differences. Other criteria for requiring a large sample are based on the following circumstances, noted by Borg and Gall (1983):

1. When the independent variables are difficult to be controlled: e.g., teachers' attitudes in the research, teaching instruction.
2. When the expected effect is undetermined due to the nature of the independent variables: e.g., the correlation between smoking and academic achievement.
3. When the samples need to be divided into several subgroups.
4. When some participants may drop out halfway: especially in long-term research or research on some sensitive topics.
5. When there is a high degree of heterogeneity in the population.
6. When the reliability of the research instruments is low: e.g., a self-designed questionnaire.
7. When it is expected to gain a higher statistical significance and statistical power.

In order to meet the above criteria and increase the reliability as much as possible, a sample of 343 participants was made. Kerlinger (1973) advised what he called the “maxmincon” principle of design, which means to maximize the intensity of experimental treatment to make significant differences from control group, minimize the errors of experimental results, and control any interfering or confounding variables. This is especially important in experimental or quasi-experimental research, where

comparison needs to be as clear-cut as possible.

Sampling is prone to “sampling errors” (also called random error or chance error) which come from random selection. However, even such error can be decreased by enlarging sample size. Another source of error is “sampling bias”, which comes from man-made bias or researchers’ bias. For example, in non-probability sampling, the probability of each individual in the population being selected for the sample is unknown. Problems may include inadequate sample size, unrepresentative samples, invalidity, non-response (mortality), or extremity of response. All the above factors may cause biased and distorted results. However, it is difficult to sample without any bias. All we can do is to ensure that all possible steps are taken in order to minimize the bias in selecting samples and derive as representative a sample as possible.

4.6. Measuring instruments

The reasons for using questionnaires as research tools in this study were: (1) An anonymous self-report questionnaire is a feasible way to investigate personal opinion without embarrassment in sensitive topics, such as social values, morality, or personal life perspectives. However, care should be taken to avoid students becoming defensive and giving socially desirable responses. (2) It does not cost a lot and it is quick to analyse the data, especially in the case of a self-completion questionnaire completed by large numbers of respondents at the same time. (3) Closed-ended questions on the basis of five scales are easy to score and to analyse. (4) Questionnaires have acceptable

response rates, and a low risk of missing data when administered under researchers' prompting or supervision. However, there are some limitations: (1) It is hard to collect students' detailed information and deeply probe questions. (2) It is not appropriate for some kinds of participants who are impatient to read. A high valid response rate would increase the representativeness of the sample.

All measuring tools were self-report questionnaires including (1) Participants' demographic investigation data. (2) Philosophical Beliefs and Stress Coping Inventory (PBSCI). (3) Stress level scale. (4) Interpersonal Behaviour Survey (IBS). Participants' demographic investigation data included gender, study field, parental status, and residence status. The Philosophical Beliefs toward Stress Coping Inventory (PBSCI) was a self- developed inventory, explained in the next section.

Stress levels were measured on a 5-point scale: "no stress", "low stress", "moderate stress", "high stress", and "very high stress", in each of seven areas: (1) school work; (2) personal health; (3) interpersonal relationships; (4) romantic relationships; (5) family communication; (6) career planning; (7) financial problems. These areas can be considered as stressors.

The Interpersonal Behaviour Survey (IBS) was established by Mauger, P. A. and Adkinson, D. R. in 1980. It was translated into Chinese by permission of Western Psychological Services in California in 1995. The Chinese edition is published by the Psychological Assessment Corporation in Taiwan. It can be used to help recognize

students' responses in dealing with conflicts, such as aggressiveness, assertiveness, and passive withdrawal. Interpersonal relationship is an index of one's stress levels and coping strategies based on personal cognitive thinking and life attitude. According to the Guidance Handbook of IBS (2004), interpersonal behaviours can be examined by three dimensions: (1) Aggressive behaviour: Actively pursuing one's goals with negative attitudes. It means hostility, attack, controlling others, and neglecting others' rights. (2) Assertive behaviour: Actively pursuing one's goals with positive attitudes, overcoming or decreasing obstacles and completing with others, and controlling oneself. (3) Passive behaviour: Passively pursuing one's goals, becoming withdrawn if conflicts happen, and fearing others' rejection. In sum, IBS can confirm the effectiveness of bibliotherapy, which can increase the external validity.

4.7. Constructing a questionnaire: Philosophical Belief toward Stress Coping

Inventory (PBSCI)

Mental constructs, e.g., cognition, values and attitudes, are difficult to be observed or measured directly, but can be explored by questionnaire which is one of the most common instruments to gather data. However, this was a new trial so it was hard to find existing well-fitted measuring instruments combining both the topics of Zhuang Zi's concepts and stress coping. Therefore, it was necessary to construct a self-developed measuring instrument.

The contents in this particular research were about philosophical issues which are

profound and subtle elements in the mind. The more complex and multidimensional the questionnaire contents are, the more criteria need to be considered. Thus, the following principles provided comprehensive guidance to facilitate constructing a new measuring instrument (Bryman, 2004; Sudman & Bradburn, 1982):

- The questions must meet the purposes and objectives of the research.
- The instructions must be clear enough for participants to know how to respond. Before implementing the measurement instrument, participants need to be informed of some matters, such as the purpose of the research, anonymity, and assurances of confidentiality. These announcements can be indicated in the beginning of the questionnaire.
- The description of questions must be explicit and unambiguous. For example, “Do you have a house?” is ambiguous. The better question is “Do you have your own house?”
- Avoid technical terms: use easy-to-be-understood language instead of terminology.
- A shorter questionnaire and salient topic is preferable: Altschuld and Lower (1984) suggested that research issues had better be salient to the participants in order to obtain a high response rate. There is no clear-cut rule on the length of a questionnaire, but if the content of the questionnaire is salient, participants will be more interested in answering it. Otherwise participants may skip or omit questions due to feelings of boredom.

- Keep the text as brief as possible: concise questions are preferable because participants can focus on the thread of the question.
- Avoid double-barrelled questions: do not ask two things at the same time unless there is a necessary correspondence between them. One question should focus on only one main idea.
- Avoid general questions: too general questions might be connected with broad dimensions, so it is hard to identify the exact reply and also the participants are likely to differ in their interpretations. In this case, measurement errors may be caused. On the other hand, it is necessary to avoid asking very specific questions concerning a sensitive topic because it might induce defensive reactions.
- Avoid leading questions: do not give hints to lead to a particular direction of reply.
- The socio-demographic questions (i.e., factual questions) are better left until the end of the questionnaire in order to reduce participants' defensiveness.

The instrument of PBSCI meets most of above criteria. However, inevitably, an attitudinal survey involving asking about values and morality might cause participants to become defensive and answer by conforming to social desirability. Thus, in order to reduce this threat, the description of these questions tends to be indirect and general. For example, "People" are self-absorbed, instead of "I" am self-absorbed.

Before developing my own questionnaire, I reviewed much relevant literature such as Folkman and Lazarus's (1984) rating scales, "Ways of coping", and constructed my

inventory according to the principles of the Likert Scale approach (Rensis Likert, 1932). For example, the items must be statements rather than questions, and items must be inter-related in order to increase reliability. Phrasing should be varied to include both positive and negative statements: items should include some reverse questions, ideally about one third or 2-3 items in each dimension, to detect whether the participants faked or not. Moreover, it is better to avoid too many neutral and extreme questions. Therefore, the above criteria were applied to this inventory. Likert also revealed that the response choices can include “unsure” or “no opinion” so that the participants are not forced to give an answer that does not reflect what they think. However, in order to avoid the participants giving up their standpoints and getting too many unclear answers, which could undermine the reliability of this study, I gave up the “unsure” option.

What is “measurement”? Zeller (1997) thought that it is the process of using numbers to connect concepts to indicators (i.e., items). In the PBSCI questionnaire, participants are asked to indicate their strength of agreement or disagreement on a 5-point scale. Responses set in this inventory are: strongly disagree=1; disagree=2; partially agree=3; agree=4; strongly agree=5. Negatively worded statements need to be reverse coded first. The higher the score gained, the more the respondent agrees with the sayings of Zhuang-Zi, i.e., they are assumed to feel less stress.

The questionnaire was developed based on my teaching experience for fifteen years, and feedback from students; besides, all descriptions of items were neutral to

avoid influencing or irritate participants. Next, the meanings of one third of the questions were reversed in order to prevent participants faking. Then, I invite five freshmen to complete this questionnaire to see if any items were still unclear or ambiguous; as a result, no item was revised or deleted, as these five examinees felt all items were appropriate.

The inventory consisted of 120 items measured on a Likert-style scale, reflecting Zhuang Zi's concepts in relation to daily life issues. It contained three dimensions as follows: [Unit A]: "Discarding Prejudice", questions 1~31. [Unit B]: "Removing Greed", questions 32~69. [Unit C]: "Forgoing Demands", questions 70~120 (see Appendix 4-1: Philosophical Belief toward Stress Coping Inventory, PBSCI). A fishbone diagram of Zhuang Zi's concepts toward stress coping illustrated is shown below:

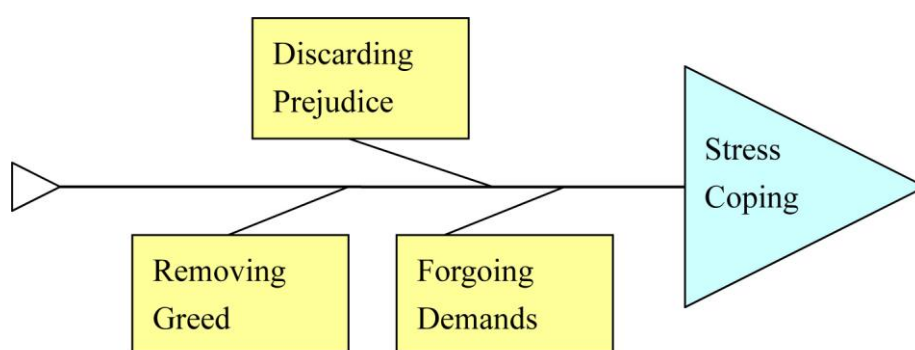


Figure 4-3: Fishbone diagram of Zhuang Zi's concepts' contribution toward stress coping

4.8. Pilot study of the instrument

Piloting is done with representative participants drawn from the research

population. This study especially focused on college freshmen, who were selected randomly from classes, other than the assigned formal groups.

4.8.1. Item analysis (120 items → 83 items)

The purpose of item analysis is to delete undiscriminating items. Before item analysis, quartile was employed to transform all data into LOW score group (Gp L), i.e., the bottom 25% of total scores, HIGH score group (Gp H), i.e., the top 25% of the total scores, and in the middle of both groups. The item analysis was performed using F statistics to check whether the variances of Gp L and Gp H were equal or not (Levene's Test for Equality of Variances). There are two situations of t value in each F statistic.

The hypothesis for testing of Equality of Variances is shown below:

$$H_0 : \sigma_L^2 = \sigma_H^2 \text{ Equal variances assumed.}$$

$$H_1 : \sigma_L^2 \neq \sigma_H^2 \text{ Equal variances not assumed.}$$

If the variances are statistically significantly different, i.e., p value < 0.05 , then H_0 is rejected; the variances are not same between Gp L and Gp H. Thus, t value must be taken from those at the side of equal variances not assumed. Otherwise, if P value ≥ 0.05 , then, t value must be from the line of equal variances assumed. Examples are demonstrated as below:

Table 4-3: An example of independent samples t-test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F-value	Sig.	t-value	Sig.
q1	Equal variances assumed	10.305	.002	5.220	.000
	Equal variances not assumed			5.248	.000
q2	Equal variances assumed	11.233	.001	1.441	.153
	Equal variances not assumed			1.437	.154
q3	Equal variances assumed	.476	.492	6.239	.000
	Equal variances not assumed			6.243	.000

This was followed by t-test (i.e., Critical Ratio value) for equality of means of each item, in other words, to identify any differences of means between Gp L and Gp H. If t value > 3 , or significance level of p-value < 0.05 , then it shows that significant differences exist between Gp L and Gp H. The items can effectively discriminate between the different response levels of subjects; that is to say, this item is discriminable and can differentiate the High score group and low score group. Otherwise, the item should be deleted if it fails to discriminate between Gp L and Gp H.

Moreover, internal consistency items analysis (i.e., Item-Total Correlation) was conducted for the correlation between each item and total scores, which should be positive. If a negative correlation occurred, items could be deleted. To indicate whether an item makes a positive or negative contribution to the reliability by being deleted from the total item reliability, the values of "Cronbach's Alpha if Item Deleted" were

checked. If an item was deleted and the total item reliability (α value) increased this would indicate that the item is a “poor” item and should be deleted from the questionnaire. Conversely, if the absence of an item reduces the total item reliability, it indicates that it is a “good” item and should be retained. After the above mentioned steps, there were 83 items left. The details are shown in Appendix 4-2: Summary table of item analysis.

4.8.2. Factor analysis (83 items → 45 items)

The purpose of factor analysis was to inspect the exploratory construct validity of the newly developed instrument, and measure the variance degree of concepts. The extraction method was principal component analysis rotated by “varimax with Kaiser normalization” through orthogonal rotation. It is best done by taking eigenvalues > 1 , but sometimes this resulted in more than 6 components, which is too many to explain one concept. Ideally, it is appropriate to have about 5 factors, and 3~5 items in each factor. These should not be too many items because variables of social science are difficult to control completely and more changeable than those of natural science. Besides, the factor loading was greater than 0.4, and a cumulative explanation over 40 % is acceptable.

Bartlett’s test of sphericity was used to testify the suitability of conducting factor analysis. If the p-value of Bartlett’s test of sphericity reaches the significance level, then it is suitable to perform factor analysis. The KMO (Kaiser-Meyer-Olkin) measure of

sampling adequacy was also applied. There are more common factors between items if KMO is greater, i.e., it is appropriate to conduct factor analysis if KMO is greater. However, factor analysis is not suitable to access if $KMO < 0.5$ (Kaiser, 1974).

Unit A, the “Discarding Prejudice” concept consisted of questions 1~31. Setting the condition of Eigenvalues > 1 , after running factor analysis, communalities which is below 0.4: q1, q12, and q25 were omitted. In the rotated component matrix, the meaning of q20 was not related to other items and too weak to represent a 2nd component. After discussion with two experts it was decided to omit this item. Finally, thirteen items remained: q3, q7, q10, q13, q15, q16, q17, q21, q22, q26, q28, q29, and q30. The KMO is 0.763, significance of Bartlett’s test is 0.000, and the cumulative explanation of unit A is 57.199 %. Thus, all the above results are acceptable. The details are shown below:

Table 4-4 : Summary table of factor analysis and reliability analysis in unit A

Item	Factor	Factor	Factor	Factor	% of Variance	Cumulative %	α
	1	2	3	4			
q30	.725						
q10	.704						
q28	.674						
q22	.491				14.958	14.958	0.653
q26		.748					
q17		.656					
q21		.654			14.593	29.551	0.662

q29	.772			
q7	.745			
q15	.741	14.368	43.919	0.679
q16	.738			
q13	.711			
q3	.583	13.280	57.199	0.654

In unit B, the “Removing Greed” concept consisted of questions 32~69. First, taking the items with eigenvalues > 1 , there were 7 components which is too many factors to converge to one concept. Thus, revision was made and to extract 5 factors, then items with communality less than 0.4 were omitted: q35, q38, q50 and q64. Again 5 factors were extracted, but there were only two items in the fifth component. Then, a further change was made to extract 4 factors, omitting q34, q54, q63 as their communalities were below 0.4. However, there were too many items in the first component and it was preferable to omit some items. Based on my knowledge and discussion with two statistical experts, it was decided to omit some items which were close in meaning or less important: q43, q47, q52, and q61. Also q32 and q33 in the second component were omitted. Thus, only 4 factors and 14 questions remained (see Appendix 4-3: Summary table of factor analysis and reliability analysis in unit B).

Unit C, “Forgoing Demands” included questions 70-120. If eigenvalues > 1 , there were 13 components, which were too many factors, so 5 factors were extracted, and items with communality is less 0.4 omitted: q.71 q.74, q.75, q.76, q.83, q85, q93, q.95,

q96, q105, q.107, q.112, q113, q116, q.117, q.118, q119, q120. However, some factors were less related to the component, such as q77, q97,q108, which were omitted to enhance consistency. The details are shown in the Appendix 4-4: Summary table of factor analysis and reliability analysis in unit C.

It is better to have 2~3 reverse questions in each unit to verify if the participants fake or respond randomly. However, there was no reverse question in Unit C, so I selected q84 and q90 to transform into reverse questions. Q84: “Concession can help reconcile an impasse” was changed to “Making concessions is a kind of permissiveness.” Q90: “Follow destiny and accept its tasks” was revised to “To accept one’s destiny is cowardly.” The items remaining after omitting and revising some items, are listed in Appendix 4-5: The questionnaire contents of the Philosophical Beliefs toward Stress Coping Inventory.

This new established questionnaire was checked for content validity (i.e., experts’ validity, logical validity) by two Chinese literature lecturers, who checked whether these items captured the main concepts of Zhuang Zi. Then, I also discussed and revised the questionnaire with two lecturers who taught the module: Designing a survey questionnaire. They worked on inspecting whether the questions are representative or inappropriate questions, for example, poorly worded narratives, and threatening phrasing or questions which could make participants feel confused or uncomfortable. It was concluded that the instrument conforms to the principles of designing inventory,

and only a few words were modified. Also, this questionnaire was inspected for face validity, which is subjectively judged by researchers, to inspect whether the instrument appears to be valid, without logical analysis. Generally, a good appearance of validity can make the participants feel good about the instrument and be more cooperative.

Finally, all components in these three dimensions were named in order to reflect the meaning of the items, All the items in these three concept dimensions are listed in Appendix 4-6: Results of factor analysis of 45 items based on Zhuang Zi's concepts.

The mapping of the above concepts is shown below:

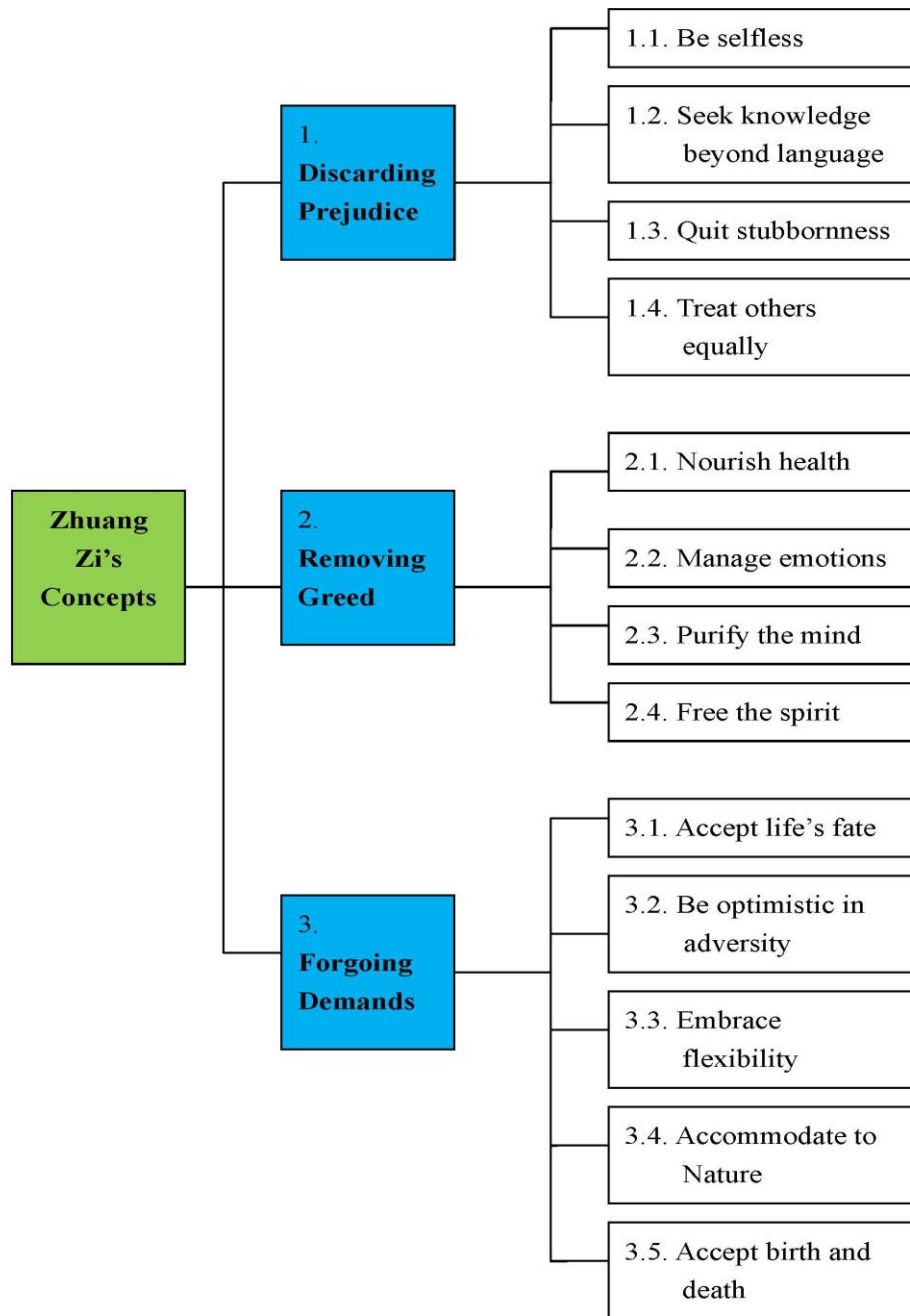


Figure 4-4: A diagram of Zhuang Zi's concepts as organised in this study

The point of listing the following items of description is to make the Zhuang Zi's concepts more explicit and concrete. The following explanation can help elucidate the meaning of Zhuang Zi's concepts used in this study:

Table 4-5: A summary of the outlines of Zhuang Zi's concepts

1. Discarding Prejudice

	Concept	Description
1-1	Be Selfless	<ul style="list-style-type: none"> • Be kindly • Be open-minded
1-2	Seek knowledge beyond language	<ul style="list-style-type: none"> • Do not prejudge based on the surface meaning of words • All knowledge has been developing and is not fixed • All knowledge is just a part of the whole
1-3	Quit stubbornness	<ul style="list-style-type: none"> • Eschew self-centred thinking • Discard bias, because there is no absolute standard for social values, e.g., rich/poor. • Do not insist on a black/white value judgement
1-4	Treat others equally	<ul style="list-style-type: none"> • Everyone has value in his own existence. • Do not feel superior or inferior; either opinion is due to ignorance. • Respect multiple social values.

2. Removing Greed

	Concept	Description
2-1	Nourish health	<ul style="list-style-type: none"> • Indulgence in material pleasures exhausts one's energy and endangers one's life. • Reduce desires in order to preserve health of body and mind.
2-2	Manage emotions	<ul style="list-style-type: none"> • Do not be disturbed by extreme likes or dislikes; these harm one's health. • Let it go when things are past.
2-3	Purify the mind	<ul style="list-style-type: none"> • Greed will pollute one's mind and create vexation. • Reduce desires through "mind fasting". • Forget disturbance through meditation.
2-4	Free the spirit	<ul style="list-style-type: none"> • The spirit is the master of the body • Spiritual contentment is more important than material satisfaction • Do not be enslaved by material enjoyment

3. Forgoing Demands

	Concept	Description
3-1	Accept life's fate	<ul style="list-style-type: none">• Do not complain about your fate.• Do not be demanding by contravening to one's nature.• The essence of life is changing and cyclic.
3-2	Be optimistic in adversity (Converse thinking)	<ul style="list-style-type: none">• Sometimes one can gain an advantage while in a disadvantageous situation.• Do not be limited by things' fixed function.
3-3	Embrace flexibility	<ul style="list-style-type: none">• Adjust oneself to changing circumstances.• Reconcile oneself to one's situation.• Be flexible in life.
3-4	Accommodate to Nature	<ul style="list-style-type: none">• Live a natural life.• Do not behave in an extreme way; do not violate Nature with artificial measures.• Go with the flow.
3-5	Accept birth and death	<ul style="list-style-type: none">• Do not be exultant about birth, and do not deny death.• Birth and death are the normal processes of life.• Deal rationally with the issue of death.

4.8.3. Reliability analysis

When developing a new inventory, it is necessary to verify its validity and reliability, potential sources of error, and ways of controlling. Reliability which refers to the consistency and stability of a measure of a concept, is concerned with the extent to which we are confident that scores are not contaminated by measurement error. Reliability analysis measures how much error variance is in the scores. The greater the reliability, the smaller the error. The less the error, the closer the observed scores are to the true scores (Punch, 2000). If a measure lacks internal reliability, it means that a multiple indicator measures two or more different things, and the measurements cannot

be valid. Basically, even if reliability is acceptable, validity is not necessarily proved, but if a measure is not reliable, then it cannot be valid. Thus reliability is a necessary, but not sufficient condition of validity.

Good testing entails reliable research instruments. The authenticity of a self-report questionnaire depends on the participants' cooperation and honesty. Cronbach's α coefficient is used to verify the internal consistency of 45 items. It was found to be high at 0.907, which is very satisfactory. Cronbach's alpha coefficient (Cronbach, 1951) verifies internal consistency, i.e., whether all the items in a scale measure the same thing. A Cronbach's alpha coefficient of 0.8 and above is satisfactory; 0.7 is an acceptable level; 0.6 is the minimum level of internal reliability (Berthoud, 2000). The construct validity and reliability of this questionnaire as explored in SPSS are displayed in Appendix 4-7: Factor analysis and reliability analysis of units A, B, C.

4.9. A description of this intervention

In the following analysis of dimensions in Zhuang Zi's fables, I refer to the framework of Rational-Emotive Behaviour Therapy (Ellis, 1979), which includes cognitive, emotional, and behavioural concerns. I have conceptualized Zhuang Zi's concepts into these three dimensions for further investigation of the effect of bibliotherapy. After digesting and transforming Zhuang Zi's concepts into practical illustrations, I mainly related "Discarding Prejudice" to the cognitive dimension, "Removing Greed" to the emotional dimension, and "Forgoing Demands" to the

behavioural dimension. This analysis was subjected to testing in which each dimension was considered to include several fables to illustrate the concepts. These were assigned to the students in 12 weeks as listed in the following table:

Table 4-6: The fables of 12-session bibliotherapy

Week	Concepts	Fables
1.		Introduction & pre-test
2.	Discarding Prejudice	The old man who makes wheels (ch. 13)
3.		Is Xi Shi a beauty? (ch. 2)
4.		The arrogance of the little sparrow (ch. 1)
5.	Removing Greed	The shepherd lost his sheep (ch. 8)
6.		The great archer (ch. 21)
7.		The pheasant in the cage (ch. 3)
8.	Forging Demands	Death of a show-off monkey (ch. 24)
9.		On clouds of Dao (ch. 20)
10.		There is virtue among thieves (ch. 10)
11.		The butcher slaughters cattle (ch. 3)
12.		Conclusion & post-test

4.9.1. Cognitive dimension: Discarding Prejudice 【Week 2-4】

I selected one main fable for each week’s discussion theme. All contents of the fables, students’ discussion results, and conclusions are recorded in “Appendix 3-3: The selection of Zhuang Zi’s fables in 12-session bibliotherapy”. Also, in my lesson plan, I refer to the relevant fables to assist interpretation of the implications of concepts, for which the detailed contents are included in “Appendix 3-4: The contents of Zhuang Zi’s

fables”. As I explained to the students, there are similarities between Zhuang Zi and Western thinkers. Thus, in addition to illustrating one main fable weekly, I also added some modern examples from both Eastern and Western philosophy to explicate and validate Zhuang Zi’s concepts, as indicated in later sections.

Week One: Introduction & pre-test

The first week was planned to introduce the cultural and historical background of Zhuang Zi. Then, the pre-test of Philosophical Beliefs toward Stress Coping Inventory (PBSCI), and Stress Inventory Scale were implemented. Except for the first and the final sessions of bibliotherapy, the implications and applications of fables in each weekly session are described as follows.

Week Two: The old man who makes wheels (ch. 13)

In the fable “The old man who makes wheels” (Appendix:3-5), it is implied that some knowledge or skills are difficult to describe completely in words; instead, one needs to explore them in person. This is similar to the explanation of Heidegger (1982), who indicated that thoughts cannot be reduced to language. People need to comprehend by contact, and identify the implied meanings, because some important essence may be concealed in the context. Also it is hard to be completely objective when we describe something, because language cannot include the whole truth, but just a part of the truth.

Most knowledge is in the form of “skills” which are divided into many parts, and do not present the whole reality (Zhuang Zi, ch. 33, para. 1). All knowledge evolves,

and each viewpoint is just a part of reality (ch 2, para. 3), but not the whole reality. Thus, if language is used to debate, there will be ceaseless turbulence (ch. 2, para. 4), and the exchange would not reveal the true reality (ch. 2, para. 3). People often define and judge things from their own positions, but these do not actually represent the reality itself. This discussion should help the students enter into a multiple perspective, becoming more open-minded.

Week Three: Is Xi Shi a beauty? (ch. 2)

In the fable of “Is Xi Shi a beauty?”, it is implied that there are no absolute criteria to judge social values. Zhuang Zi disputed the stereotypical social appraisal, such as beauty/ugly, rich/poor, gain/loss, wise/stupid, fortune/misfortune, etc. His point is that it is better to be value-free. Zhuang Zi believed that all beings are equal; this is not to take away individual features, but to keep the uniqueness of the individual while maintaining multiple values. Only if we discard discrimination can the essence of the thing be seen. Thus, we should not assert our own judgment as supreme, because such man-made criteria will probably not be absolutely right forever. For instance, a person may think they are the most intelligent because of their high intelligence test score; but in fact no one can guarantee that this “superiority” is an absolute truth. As we know, science is not perfect, and the I.Q. test may have unknown flaws such that it cannot encompass all aspects of intelligence, or fails to test exactly one’s potential. Moreover, it would be endless and meaningless to seek to defeat others and try to be the highest winner, as one

may overcome one opponent but cannot ensure there are no other potential opponents in the future. What people do not know about is much more than what we know (ch. 17, para. 2). From the view of “Dao”, there is no dignity and indignity among beings (ch.17). “Dao” is the entirety, everything is included and valued with non-prejudice. In Zhuang Zi’s view, if people fight for their own opinions, and raise disputes, then this world will be unharmonious. Commonly, rejecting prejudice does not mean to discard any criteria; instead, it implies discarding man-made discrimination and extreme dichotomous judgments, getting rid of negative inner language, but following the common criteria of “Dao”, i.e., follow the principle of natural rule. Thus, according to Zhuang Zi, the sage is not bigoted in his opinions, but respects others, and achieves a magnanimous harmonious life (ch. 2, para. 4).

Parallel to Zhuang Zi’s view, in the Western literature, Popper (1972) indicated that there is no theory that can be evidenced to be absolute truth. He thought that people create knowledge through the process of conjectures and refutation in analysis of the nature of scientific inquiry, and all we can do is attain a relatively better theory which is valid according to strict testing. On another front, the French philosopher Michael Foucault tried to challenge the dominant values; he thought that knowledge is power, and the dominant discourses of society decide people’s values and guide their lives; social culture strongly influences the individuals (White & Epston, 1990).

In my lesson plan, one popular western story was used to point out the need to

avoid stubbornness. A priest was waiting to be rescued from flooding. When the flood reached up to people's knees, a small boat came to rescue the priest. However, the priest refused and said, "Thanks, I believe God will come to rescue me." One hour later, when the water up to peoples' chests, another boat came. The priest strongly believed God would help him as he was so faithful to God, and refused to go to boat. Then, the flood swallowed up the church. The priest climbed onto the roof, and refused to go in the helicopter. Finally, the priest drowned, and went to heaven, where asked God why, since he believed so strongly in God, God did not come to rescue him. God replied, "I had many boats and a helicopter to rescue you. God helps those who help themselves. However, you are so stubborn, you died for this".

Week Four: The arrogance of the little sparrow (ch. 1)

Beck (1972) proposed that "cognitive distortions" result from clients' wrong automatic thoughts, including arbitrary inference, selective abstraction, overgeneralization, magnification and minimization, personalization, and dichotomous thinking. "Arbitrary inference", is parallel to Zhuang Zi's fable of "The arrogance of the little sparrow" (ch. 1), which teaches that people had better not prejudge and tease others, due to ignorance and incorrect cognition. Also, the fable of "The Frog in the Well" (ch. 17) showed how bumptious the frog was due to its personal limited experiences and self-centred thoughts.

Zhuang Zi thought "all beings are equal" (ch. 2), i.e., humans and all creatures both

need to be valued. Thus, it is unnecessary to make comparisons or tease others. Only when people sense the importance of this, can they really protect Nature and cherish lives. For example, it could be said that “humans are superior to dogs” because humans can speak, drive, build houses, etc. However, from the perspective of a dog, dogs are superior to humans in their keen olfaction and hearing. Every being has its strengths; no others can completely replace it, and each being needs to respect the other. Everyone has different contributions to society, but our essence of existence is equal. From the view of heterogeneity, everything can be unique; however, from the view of commonality, all beings exist symbiotically in the same life community (ch. 2, para. 6; ch.5). “All things are common with myself.” Such subject and object meanings intermingle, which can eliminate all peoples’ antagonism.

Adler (1979) emphasized that people have a sense of inferiority, which is the motivation for struggling and creativity. However, this assumed outcome sounds too optimistic, because this may not work for some people who are defeated and withdraw from their experiences of frustration. Zhuang Zi provided an alternative thinking, that there is no absolute standard for judging good or bad; thus, people should not feel inferior or superior, and just seek for whatever they can. Life would be easier and more relaxed in this perspective.

Once people have biases, and selfishness, they are likely to pay attention subjectively and selectively. It is hard to communicate if one’s mind is stubbornly

closed, occupied, and exclusive. One needs to keep the mind open to give life enrichment. Zhuang Zi expressed this through metaphor in the fable “Hiding the universe within the universe” (ch. 6, para. 2), in which a man wanted to conceal his treasure boat against burglary. He hid it in a secret valley and felt very conceited because nobody could find it. Unexpectedly, a man of might found it and carried it away. Generally, it is wise to hide a small thing inside a big thing, but in this case, the outward situation was unpredictable. Thus, it is vain to occupy and hide the treasure of the universe by any man-made conceit. One should just let things exist in their own way, and return the Universal things to the Universe.

Likewise, in a famous story of Zen religion, it is related that only a small amount can be held tightly in the hand, but if one opens one’s palms, the hands can take more things. What stress a person will suffer if he continuously grips and occupies something. It will result in good outcomes if we are open-minded and share with others. Similarly, another fable also introduced in the class described two people who were going to be reincarnated. God asked them, “What is your priority for your reincarnation? Do you choose to be a person in the mortal world who always has people help you, or the person who always helps others?” The lazy man chose to be the person that others always help, so he need not work hard; the other man was compassionate and wanted to share and help others. So God let the former be a beggar who always needed to be helped and given doles. The latter was reborn as a millionaire and helped many people.

Nature is so great that it offers itself as a tribute unselfishly to all things, but does not occupy them (ch. 6, para. 9). People should learn from Nature to be selfless. Selflessness could help to terminate conflicts completely, and create a society full of philanthropy and friendliness. The way of Nature is an act of grace and unselfish love. If one wants to love others and Nature one should, do it before it is too late to do so (an example is provided in the fable, “Fish without Water”, ch. 6).

4.9.2. Emotional dimension: Removing Greed 【Week 5-7】

The ancient Chinese politician Guan Zi (725-645 B.C.) said that if the national warehouse is sufficient for feeding people, then people can practise proprieties; if people have a sufficient supply for living, then they can be aware of a sense of shame or honour. That is, it is essential for people to be able to meet basic physiological needs (Guan Zi, ch.1). However, after peoples’ basic needs are satisfied, they often produce may WANTS. These desires often bring forth stressful life and other side-effects.

Week Five: The shepherd lost his sheep (ch. 8)

Desire has huge power; it can make great dreams come true, but, it also can destroy one’s life and bring unrecoverable disaster to humans. In this fable, one shepherd boy lost his sheep due to his concentration on reading; the other boy lost his sheep due to gambling. The result was the destruction of their tasks, no matter what hobbies they indulged in. This is one of the reasons why Zhuang Zi advised moderation of human desires, and appealed to his followers to cut down unnecessary and harmful desires.

Plato (427~347 B.C.) divided the person into three essences: (1) Appetite (desires); (2) Reason; (3) Spirit. Desires are the biggest portion, but they are controlled by reason, i.e., one's temperance decide what he/she is. People could be slaves of desires, especially in the material world (Plato, 2006). Today's society is bombarded by advertisements to inflate people's needs. Most people have so many desires to chase that they do two or more things at the same time, so they unconsciously become rushed and irritable. Also, in the age of information explosion, everything changes so fast that it makes people become insecure and anxious. Moreover, many college students indulge in sensual pleasures or interests, such as becoming addicted to the internet and staying up all night. They are so young that they would not be conscious of health problems immediately, but later they may get liver troubles or warnings that frequent absences from school will ruin their future.

People's lifespan is limited, but the pursuit of desires and knowledge can be endless. Despite knowing this truth, most people are still greedy and very fond of the constant pursuit of desires that would harm their health eventually (ch. 3, para. 1). Similarly, Lao Zi also suggested reducing desires, because excessive pursuit of interests could incur the loss of money unnecessarily; while making a collection would create a heavy burden. One can avoid endangering life by realizing that "enough is enough" (Lao Zi, ch. 44).

Zhuang Zi did not mean to oppose wisdom or knowledge. Rather, he valued

knowledge; but one cannot indulge in it to a degree that impairs one's health. "Nature" gave people their bodies, and nourishes body and spirit; it is unnecessary to add something artificial to the body because too many contrived pursuits would potentially endanger one's life; the best way of preserving health is to keep the original and natural way of the body (Mou, 1975).

It is useless to be greedy. Zhuang Zi made an example of the little wren, a bird which is skilful and quick in making nests in the forest. However, it only needs one nest to live in. The other example is that of the little mole that walked a long way without a drink of water. When it saw the river, it was so thirsty that it wanted to drink up all the water of the river; however, it could only fill up its small belly. Although one's desires may be enormous, one can only contain a certain amount due to one's limited body (Ch. 1, para. 8). Zhuang Zi encouraged people not to be greedy, because one's "wants" are often more than one's "needs". A content mind is the happiest in life.

In sum, pursuing desires is the nature of humans, and they have material needs that should be met for the sake of physical health, so totally restricting desire is not good idea, but instead, a sufficient cure is to make people willingly reduce their desires. Zhuang Zi preached against chasing greed by reminding people of the dangers of indulging in material pleasures. When people fall into extremely passionate pursuits, they might ignore the danger around them and harm their lives, either bodily or mentally. Also, Zhuang Zi reminded people to reserve for themselves a route for retreat or

fallback position in order to balance life. Besides, he led people to see a broad life vision in order to sublimate greed, such as in the fable of the roc which when flying up to the highest sky saw a broader vision and experienced how wide the world is. Some people are always discontented, so they keep chasing fame and fortune all their lives. Actually, desires are not the real root that causes one to lose one's way; the root is from oneself, e.g., because one's mind is full of insecurity, incompleteness, inferiority, or loneliness, which causes people to keep constantly chasing outwards all their life.

Week Six: The great archer (ch. 21)

The fable of “The great archer” (ch. 21), implies that one should not be waylaid by one's desires into forgetting to carry out tasks. Also, one should not be frightened by others' criticism or external environmental threats. One should not be immersed in either depressed or ecstatic emotions because such extreme emotions could be harmful to health. The instruction is to do things sincerely and keep the mind calm, no matter what the results are (this state is “Wu Qing” in Chinese, as in the fable of “Can a man have no passions?”, ch. 5). “Wu Qing”, though literally “without feelings” does not mean being emotionless or unfeeling, callous or indifferent. In fact, Zhuang Zi truly realized what affection is, and how to go beyond the fetters of feelings. This lesson is especially helpful for releasing stress in this competitive society. The following is my lesson script:

By observing the phases of the moon, the sage apprehended that everything

constantly changes, and is not fixable; likewise, fame and position are not constant and eternal. Thus, it is not necessary to be wildly excited if we gain; nor need we despair if we lose (ch. 17, para. 2). Zhuang Zi indicated that extreme likes or dislikes are apt to harm one's health in body and mind, so it is better to keep the mind calm and natural just as in ordinary times (ch. 5, para. 6). People can have a variety of emotions, but the mind need not be disturbed by these emotions, and one should try to be "beyond" the influences of the environment. This is just like a story of Zen: While Master Ing-Zung was lecturing on the Sutra, a flag suddenly began to wave. One monk said that it must be the wind that made the flag wave, but another monk argued, "No, this is the flag itself waving. From the perspective of the wind, the wind is static, and the flag is waving". Both monks debated seriously. Finally, the founder of Zen of the sixth generation, Master Hui-Neng, came in and heard these arguments. He said that waving is neither caused by the wind nor by the flag; it is the waving by "our mind" which is disturbed by the outward environment (Hui-Neng, 1998). Keeping mental equanimity means to sincerely confront trouble when it comes, and to forget it when the trouble is gone. Likewise, a mirror reflects truly when things are in front of it, but is blank when objects are gone. The pure mind is itself like a mirror to reflect things only as they are, but not to ruminate on troubles all the time (ch. 7, para. 6). Forget past suffering, and do not worry about the future either. Be open-minded and live in the here and now. The famous scholar of modern Chinese culture, Hu Shi (1891-1962) made an interesting

metaphor; that water is quickly boiled within a small kettle; likewise, narrow-minded people are easily irritated.

Week Seven: The pheasant in the cage (ch. 3)

Zhuang Zi emphasized that keeping the mind free is more important than material enjoyment, i.e., one should not be enslaved by desires (as in the fable of “The pheasant in the cage”, ch. 3). People are born with bodies that need sustenance to survive, but if one is too occupied with material enjoyment, isn’t this pathetic? People keep struggling all through their lives, but they are not really sure for what; isn’t this sorrowful? Our body is gradually getting older, energy declines, if our life ends in a haze, isn’t this kind of life most deplorable (ch. 2, para. 2)? In fact, the spirit is the real master of body, and spiritual abundance is more important than material riches.

Moreover, in another fable, “Lie Zi moved by the wind”, there was a man who could glide quickly just like flying, but only when the wind was blowing strongly, but Zhuang Zi thought that the man was not really free. The man was relying on the outward conditions. Only when one is not restricted by outward situation, then one would be really free. Generally, people hunger for something until they possess it, but after possessing it they would worry about losing it. This is also not real freedom; one’s spirit must be emancipated from material temptation. It is most precious to purify our mind and possess virtue, turning back to one’s nature and being one’s true self (as the fables of “Yan Hui’s Fasting of the Mind”, ch. 4).

In my lesson plan, I also talk about how important spirit is. Plato in his book “The Republic” indicated that the whole is equal to the sum of its parts; but in humans, the whole is greater than the sum of the parts because only humans have a Spirit (Nous), and Reason (Ratio). Thinking is formless but can be passed down the generations. We cannot physically live forever, but the spirit is immortal, a matter which is usually neglected by most people. Enjoyment in the material world is temporary, but spiritual cerebration can be passed on eternally, just as the flame of the candle can be passed on to others (for instance as in the fable of “The fire burns on”, ch. 3).

Further, how can we remove our disturbances and purify our spirit? An option is to use the approach of “mind fasting”, i.e., purifying and steadying one’s mind through quiet reflection and meditation, listening to one’s inner sounds with the heart, emptying one’s mind, and finally reaching the serenity and “non-self” (self-less) empty state (ch. 4, para. 1).

The sage has few desires, so he has no nightmares while sleeping, he does not worry while awake, he eats simply, and he breathes deeply (ch. 6, para. 1). Through meditation, he can forget any desires, both physical and psychological. He can calm his mind to reach a carefree state, and be united with Nature as one (ch. 6, para. 9).

Yalom (2005) in his novel, “The Schopenhauer cure”, implied that Schopenhauer practised Zen meditation to clear away distracting thoughts. He put aside obstinacy, trying to not be influenced by outward things, and keep far away from suffering. Yalom

argued that this Zen is an effective alternative, but it does not fit with all stages in life; youth is passionate for good reasons. Yalom also thought that most lives are not painful, so it is unnecessary to sacrifice life passions, enjoyment, and pursuits, just to achieve a tranquil life. It could be said that Yalom in the European tradition argues against the idealized detachment of such Eastern philosophies, but he does seem to recognize the usefulness of Zen meditation.

4.9.3. Behavioural dimension: Forgoing Demands 【Week 8-11】

In Zhuang Zi's concepts, "forgoing demands" does not mean to give up the initiative, but rather to engage oneself under the rules of nature, i.e., to behave moderately, without excess or insufficiency. We need to accept one's destiny, to moderate our demands. A Chinese saying is, the fruit will be not sweet if one is impatient and picks the immature fruits on the tree. We must not act contrary to the rules of Nature. For example, we are supposed to sleep at night, and work during the day. However, some people cannot stop being fascinated with some hobbies, and stay up working all night, only to be exhausted the next day. If a thing reaches its extremity, it will reverse its course and cause negative outcomes. This is the same as the nature of forces that result in stress.

Week Eight: Death of a show-off monkey (ch. 24)

In Zhuang Zi's fable "Death of a show-off monkey" (ch. 24), the monkey flaunted its skilful art of dodging arrows, and finally died under hundreds of arrows shot at once.

He implied people should not be pompous and unaware of their limitations. Instead, people need to discard worldly boasting and play safe. In other words, be humble and supple to wait for the right time; that is real strength and real wisdom. A humble man values not only himself, but also others; however, an arrogant man values himself but devalues others.

Lao Zi thought that the people who are really smartest look dull; the real winner behaves quietly (Lao Zi, ch. 45); the really great thing is formless (ch. 41). Regarding the advantages of meekness, as it written in The Bible, “The meek shall inherit the earth” (Psalms 37:11). Lao Zi said that the most supple (meek) matter is water, but the hardest cannot harm it (ch. 78). Also, water moisturizes all beings but it does not claim credit for itself (ch. 8). Water is formless, profound, but strong enough to break the hardest things, just like constantly dripping water can make holes. Emphasizing the character of suppleness does not mean that one should be wimpish or passive. Instead, Daoism expresses the profound wisdom that softness can overcome the hardest, making concessions can sometimes gain advantages, and sometime goals can be achieved easily through indirect or converse ways.

Converse thinking, which means shifting our fixed thinking out of its customary inertia, is an alternative to transcend problems, reduce stress, and make use of discarded materials. There is a story that Michelangelo Buonarroti (1475-1564) once set his eyes on at a large block of ordinary stone for a moment, and the miner told him that this

stone was of useless quality, and he could take it away if he liked. However, Michelangelo could see its usefulness, and later he sculptured it into the famous “smiling angel” statue, located in the central west doorway of the Cathedral of Notre Dame at Reims. Uselessness and usefulness have just a small divergence.

Everything has two sides. Zhuang Zi thought that uselessness may have great usefulness. From different perspectives, one can still discover something valuable even when it seems not useful at all. An example is in the fable of the twisted ailanthus tree with many knots, which is not good for making furniture, but was used to free the carpenter’s axe, and save its life (as in the fable of “The useless ailanthus tree”, ch. 1, para. 12). It is not necessary to be upset if things do not go as one wished; just changing a perspective or converse thinking would help one find workable ways. No decision is intrinsically perfect; it depends upon what perspectives it is grounded in. Uselessness may occur in regard to a certain use, but the object may be useful from another perspective. Thus, reflecting with reverse thinking can help prevent us from bias, blind spots or fixating on certain desires which are not real needs.

Sometimes, fortune and misfortune exist mutually and simultaneously. A blessing may be in disguise (Lao Zi, ch. 58). To give an example from an ancient Chinese fable, there was an old man whose family name was “Sai”. He was very upset when he lost his property, a mare. However, this mare brought another mare back together with her two weeks later. The old man was very pleased with his double wealth. Later, his son rode

on that new mare, but fell off and broke his leg. The old man was very sad and hated that mare. However, with his broken leg, his son was exempted from military service when soldiers came to forcibly recruit the young men of the village. Afterwards, all the soldiers died at the front. The man's son's life was spared because he had lost his leg. This story tells us not to prejudge, because the outward situation cannot be decided completely by us, and the long-term effect cannot be known.

Week Nine: On clouds of Dao (ch. 20)

Life is like a seesaw- whatever heavy loadings the environment imposes, so much energy will exert pressure in the balance of life. However, if we can find an effort-saving fulcrum, it would prevent us from wasting energy, and also help us interact more harmoniously with the environment.

Only under specific circumstances can uselessness or usefulness be distinguished. Zhuang Zi said that he would like to become a person either useful or useless depending upon the current situation, following the course of "Dao" (Appendix:3-6). Life goals may be the same, but the approach can be flexible, adjusting to changing circumstance (ch. 20, para. 1). Further, Zhuang Zi said that everything is changeable while time is moving forward, and fate is unpredictable. What should we do? What should we not do? The natural way is to accommodate ourselves to environmental vicissitudes. (ch. 17, para. 4). There is an old saying, "Nature is the best physician." Besides, appreciating and immersed in the beauty of Nature, we can also learn from it to preserve our life

naturally.

Zhuang Zi was aware that outward situations cannot be controlled completely by us, and to recommended that people accept their fate without complaint. However, this is different from predestination or superstition, and it does not mean having no dreams, but waiting until the right time and right place. People still need to plan their lives, and also need to revise their plans to fit into new situations.

When the outward environment is inevitable, we must be aware of our limitations and put down pride, to accept the things which we cannot change (ch. 4, para. 2; ch.5, para. 2). Suffering unavoidable stress, one's mind might be in constant flux and fear; but one needs tranquillity of mind to get rid of outward disturbances (ch. 6 ; ch. 26). If people stubbornly fight against an implacable environment, or strongly resist the undesirable fate that is destined for them, the outcome would be like the tragedy of Oedipus in Greek mythology. Thus, one should not complain about adverse situations, but seek to be carefree, accept of fate, and just "go with the flow". If this attitude can be attained, stress will not bother us any more, and we will in addition achieve a healthy long life (ch. 13).

One can possess virtue regardless of one's appearance or defect. For example, some ugly people with handicaps can also be influential on others, as in the fable of "A deformed man with virtue", whose morality had deep influence on the Duke and helped keep the country strong (ch.5).

Death is an irresistible and irreversible event in life, which is hard to accept for most people. Zhuang Zi said that the sage is not exultant about birth, and does not fear death, but regards birth and death as the natural processes of life. Once people are born, they will die some day no matter who they are (ch. 6, para.1). Nature gives us bodies, lets us live by labouring, relaxes us by aging, and rests us in the end by death. Thus, people who really understand life would greet both birth and death gladly (ch. 6, para. 2). This does not mean to deny the essence of life, but to understand thoroughly and accept the rule of Nature. Compared to the cosmos, the human life span is very short, and we need to accept this fact rather than fear it.

In the fable of “Zhuang Zi’s wife dies” (ch. 18), Zhuang Zi was very sad for the first few days after his wife death, but after he realized the meaning of death, then he stopped crying, and could rationally deal with the issue of death. According to Holmes and Rahe’s Stress Scale (1967), which assigns scores of “Life Change Units” that apply to life events in the last year, the most stressful event is to confront a loved one’s death. The top score of 100 points is for one’s spouse death, which is very hard to go through. Contrasting Zhuang Zi with a modern real case, Mitch Albom (1997) described a discussion on the issue of death issues with his professor Morrie Schwartz sixteen years ago; at that time Schwartz had only a few months’ life remaining. Mr. Schwartz did not fear death, but instead lived his life positively, and gained meaning in life.

Week Ten: There is virtue among thieves (ch. 10)

Socrates pointed out that the real purpose of knowledge is to gain virtue. However, some people apply knowledge to commit crime. In this fable (Appendix:3-9; 3-10), clever criminals adopted knowledge and many devices to commit crime skilfully, borrowed the sages' morality to rationalize their crime, and legitimated their purposes. Increasing rates of economic deception, white collar crime, and premeditated murder are reported on TV, and some current careerists even start wars to serve their interests, by employing various tricks to distort fact and carry out the heavenly wishes under double standards.

Originally, technology was a device to help people achieve the happiness, like ancient handicraft made by the strength of nature, but now technology has become a means to artificially force and exhaustively exploit the inner energy of things or people, and to do something harmful. People have lost their authentic self in such a technical world (Heidegger, 1959). People had better return to a life of purity and simplicity.

Week Eleven: The butcher slaughters the cattle (ch. 3)

Zhuang Zi gave an example of cooperation with Nature: a butcher carefully slaughtered cattle according to the skeleton (i.e., following the operational rule of Nature, or its natural framework), avoiding cutting bones and tendons, so his knife could be kept as sharp as a new one. Things will be done smoothly and easily if one yields to the rule of nature (Lao Zi, ch. 25). Besides, in my lesson plan, another example

is that Lao Zi expressed the significance of following the rule of Nature and the implication of behaving naturally, comparing managing a country to frying a small fresh fish. It would be messy to fry tender seafood with the biggest fire. Likewise, the king needs to be very careful to manage a country to avoid citizens' complaints. Thus, the king should not implement severe orders and numerous policies, or overly disturb citizens (Lao Zi, ch. 60). The better way to run the country well is to give people security and let them take their ease without bothering them too much. It seems that in Lao Zi's plan, the government is not busy in implementing various policies, but the country progresses spontaneously and naturally. In other words, the state's behaviour is low-key, i.e., it acts without making it widely known, but things are done naturally, i.e., to allow things to act naturally without demanding or too much contrived intention (Lao Zi, ch. 37). We might take the metaphor of a swan on a lake: It seems to glide without labour over the water, but its webbed feet are paddling below. However, this activity is merely naturally and unconsciously carried out by the swan.

In sum, anything that goes to extremes or does not wait for the natural mature time will cause a counter-reaction. For example, if a person is over brave, he/she may hurt himself/herself or others (ch. 2, para. 7). If a person extremely insists only he is right, he may become a monomaniac.

Week Twelve: Conclusion & post-test

The last week is devoted to an overview of Zhuang Zi's concepts in the context of modern life. Secondly, we apply the Philosophical Beliefs toward Stress Coping Inventory (PBSCI), and Stress Inventory Scale again as a post-test. In sum, all the concepts of Zhuang Zi can be interlinked and inter-implicative without contradiction. The essential concepts might be to follow the rule of Nature, because everything has its rule, we cannot control everything; also, forgoing demands to release fixated thinking and feelings. Daoist tips of life are extracted as below:

Not to strive, but to give.

Not to compete, but to benefit.

Not to be feeble, but to be flexible.

Not to be artificial, but to be natural.

Not to oppose, but to compromise.

Not to tolerate life, but to appreciate life.

4.10. Summary

This has been an exploratory research which tried to explicate the general stress phenomena of college students and testify to the effectiveness of bibliotherapy in promoting stress coping. A quasi-experimental design was applied in this study, involving bibliotherapy group, self-help experimental group and control group. Each experimental condition was

applied to three classes. Since there was no suitable psychological inventory at hand to fit to the contents of this study, a new rating scale was established: Philosophical Beliefs toward Stress Coping Inventory (PBSCI) and Stress Level Scale. These served as pre-test and post-test instruments. Reading intervention combined with follow-up activity was implemented over twelve weeks in the bibliotherapy experimental group, while the self-help experimental group was limited to reading alone. After completing the interventions, the previous tests and a standard psychological test, Interpersonal Behaviour Survey (IBS), were implemented in order to confirm the effectiveness of bibliotherapy. All the statistical procedures and their outcomes will be reported in the next chapter.

CHAPTER FIVE

RESULTS AND DISCUSSION

The purpose of this chapter is to present the statistical analysis of the data produced in the quasi-experimental research framework, and to assess whether the hypothesis is valid and confirmed. The hypothesis is that bibliotherapy utilising Zhuang Zi's philosophy can bring significant decreases in stress levels for college students in Taiwan. Therefore, the crucial independent variable in this study is the application or absence of bibliotherapy. The experiment included three groups: Group 1 (full treatment exposure to bibliotherapy), Group 2 (reduced treatment exposure), and Group 3 (no treatment exposure). The dependent variables are levels of stress, differentiated as of seven kinds: stress from School Work, Personal Health, Interpersonal Relationships, Romantic Relationships, Family Communication, Career Planning, and Financial Problems. In addition, the Interpersonal Behaviour Survey, IBS inventory was employed to confirm the effects of bibliotherapy.

5.1. Design of the statistical analysis

Before carrying out the analysis, it was necessary to apply several statistical procedures to ensure that all independent variables were appropriate, and also to ensure that the experimental groups had been correctly constructed in undertaking the experiment. First, the demographic data were analysed by means of Chi-Square procedure to identify whether the structure and characteristics of the demographic

variables for each group are close to those of the population, and whether they each reflect the real distribution of the population. Secondly, bivariate analysis was employed to test for the existence of any statistically significant correlations between demographic variables in groups and the whole sample. Third, t test or One-Way ANOVA were utilized to find out whether there were any statistically significant differences in pre-test stress in related to the demographic variables. The t test was employed when analysing the differences between two groups, for example for gender, which has two categories, male and female; whereas One-Way ANOVA was employed to analyse variables with more than two categories.

In order to avoid causing bias, we need to check whether these three groups were in the same situation before the experiment, as regards both their stress levels and philosophical background. For this purpose, we applied a pre-test through One-Way ANOVA procedure. In contrast, however, it was expected that the groups would differ in stress level after performance of the experiment.

Following the experiment, pre-test and post-test scores for both stress levels and levels of agreement with Zhuang Zi's concepts were compared among groups, in order to identify the effects of the intervention. Further, regression was used to find which of the factors determine the outcome of stress.

Then, the correlations were analysed between Zhuang Zi's concepts and Stress reduction. In addition to measuring above categories, the Chinese edition of the

standardized test, Interpersonal Behaviour Survey (IBS), which includes scales measuring aggressive behaviour, assertive behaviour, and passive behaviour was applied to all the groups as a post-test, to investigate whether any correlations existed with Zhuang Zi's concepts and stress levels in order to understand more fully and confirm the impacts of bibliotherapy. Finally, the independent variable were examined to investigate any potential impacts on the effects of stress reduction.

Analysis of data

5.2. Analysis of the participants in terms of demographic variables

As the first step in testing the characteristics of the groups, the raw data were systematically organized into a large detailed table (see Appendix 5-1). The table lists the variables, numbers, and reports the results of the Chi-Square procedure performed on groups and the whole sample. Chi-Square procedure can help analyse nominal variables and investigate the differences in each group and the whole sample. Detailed descriptions of these results are presented in the following sections:

5.2.1. Gender representation

There were a total of 343 participants in this study. Group 1 included 136 participants, Group 2 included 103, and Group 3 included 104. In Group 1, there were 79 males and 57 females, the Chi-Square value is 3.559 (Sig.=0.059). In Group 2, males numbered 60 and females are 43, with a Chi-Square value of 2.806 (Sig.=0.094). However, in Group 3, there were 94 males and 10 females, and the Chi-Square value is

67.846*** (Sig.=0.000). In total, there were 233 males and 110 females, with a Chi-Square value of 44.108*** (Sig.=0.000) meaning that there is a significant difference in the size of the gender groups. The gender distribution of Group 3 and of the total sample was imbalanced because the students in this technical oriented college and most departments were composed of more males than females. The imbalance of gender representation reflects the actual distribution in general in this school. This quasi-experimental research creates a bias and a skewed distribution among groups that is hard to avoid.

5.2.2. Departments of study

In this study, nine different departments were selected and randomly divided into three groups. There were a few exceptions to the departmental composition of the classes. For example, a few students wanted to take certain elective modules, but the scheduling conflicted with their required modules in their departments. In this situation, those students were allowed to take different modules with the same requirements in different departments. Thus, Group 2 included one student from the department of industrial and commercial design.

The field of study for Group 3 was largely engineering which accounted for over 70%. However, Group 1 and Group 2 were more varied, with a greater interest in social and business topics of study. This sample bias among the groups could conceivably threaten the validity of this study and constitute a source of sampling error. Inevitably,

any quasi-experimental research often involves skewed sample groups, and this study is not exempt from such bias. However, it was difficult to assign different fields of study into these three groups in a completely balanced way due to this quasi-experimental research design.

5.2.3. Parental status

In the dimension of parental status for the total sample, 259 students, had both mother and father present in the family, 76 students were in single-parent families, and 8 students were in other situations, e.g., their parents had both remarried or were deceased, or they were orphans, or lived with grandparents. The Chi-Square value is 294.793*** (Sig.=0.000). In Group 1, 95 students had both parents, 37 students had a single parent, and 4 students were others; the Chi-Square value is 93.632*** (Sig.=0.000). In Group 2, 80 students had both parents, 20 students had a single parent, and 3 students were others; the Chi-Square value is 95.320*** (Sig.=0.000). In Group 3, 84 students had both parents, 19 students had a single parent, and 1 student was in the “others” category; the Chi-Square value is 109.981*** (Sig.=0.000). The frequencies of parental status among groups were as shown in Figure 5-1:

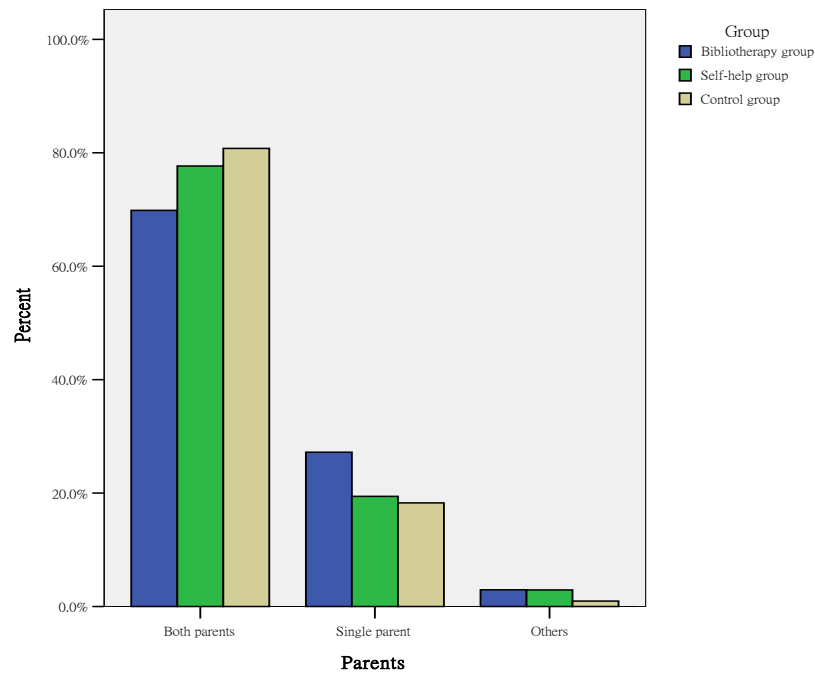


Figure 5-1: Parental status of student’s family for each group

The distributions of parental status were similar in the three groups, i.e., no matter what groups in this study, most students came from the families with both parents, those coming from single-parent families accounted for around 17%~27%, and students coming from other situations were less than 3%. The results show significant differences in all groups and whole sample, in that their distributions were similarly asymmetrical. However, this reflects the actual distribution of the population, i.e. the structures of these three types of parental status are also those of the population. Thus, these samples are still representative.

5.2.4. Residential status

The results showed that 314 students lived at home with their family, and 29 students lived by themselves, on or off campus; the Chi-Square value is 236.808***

(Sig.=0.000). In Group 1, 124 students lived with family and 12 students had outside residence; the Chi-Square value is 92.235*** (Sig.=0.000). In Group 2, 93 students lived with family and 10 students had outside residence; the Chi-Square value is 66.883*** (Sig.=0.000). In Group 3, 97 students lived with family and 7 students had outside residence; the Chi-Square value is 77.885*** (Sig.=0.000). All the sub-groups and the whole sample showed statistically significant differences between those living at home and those having outside residence. Obviously, the numbers of students who lived at home were much greater than those with outside residence in general in this school. These demographic descriptions are highly asymmetrical, but reflect the general situation of students in Taipei.

5.3. Bivariate analysis of demographic variables

Bivariate analysis is used to explore the contingency between two categorical variables. These nominal demographic variables had to be analysed through Chi-Square procedure in order to provide a deeper understanding of the samples and to investigate the characteristics of the samples, and also to explore and understand the dynamics of the sample and its sub-groups. After analysis, only three dimensions were found to reach significance level: group x gender, group x department, and gender x department. Except for the above, none of the variables showed significant relationships (see Appendix: 5-2).

As a result, there is a significant difference between the dimension of group x

gender, with a Pearson Chi-Square value of 34.545*** (Sig.=0.000); the other significant difference for group x department with a Chi-Square value of 684.000*** (Sig.=0.000). In Cross-tabulations analysis, if any cells have an expected count of less than 5, then Fisher's Exact test should be used instead of Pearson Chi-Square procedure. For example, the residence x departments cells had expected counts less than 5; Fisher's Exact Test=4.735 (Sig.=0.792). Another significant result for gender x department, where the Pearson Chi-Square value is 150.547*** (Sig.=0.000). In sum, the results show that distributions of male and female are quite asymmetrical among departments. This is also the reason for the asymmetry of gender among groups. However, there are no significant differences for the remaining demographic variables, which suggests balance in the structure of samples.

5.4. Group and whole sample analysis of stress levels found in the pre-test in relation to demographic variables

The purpose of this analysis is to look for statistically significant differences in levels of stress among demographic variables. The t test is employed to analyse the significant differences when the variables have only two choices, and One-Way ANOVA is employed when the variables have more than two choices in one classification, e.g., three types of parental status.

In order to avoid causing bias among departments, the only student from the Department of Industrial and Commercial Design was temporarily excluded because this

was a personal opinion choice and lacked representativeness. The t test procedure was employed to analyse the differences in pre-test stress level variables between males and females, and also to identify the differences of stress level variables between students living with family and those living away from home. One-Way ANOVA procedure was employed to understand any significant differences of stress level variables among departments, and likewise among parental status. After analysing each demographic variable against all pre-test stress levels, only two demographic variables, i.e., department and parental status, were found to exhibit significant differences in stress levels. There were four significant differences: (1) The department of study was found to have a significant association with School Work stress. (2) The department of study was found to have a significant association with Romantic Relationships stress. (3) The department of study was found to have a significant effect on Career Planning stress. (4) Parental status was found to have a significant association with the stress levels of Financial Problems. The other demographic variables did not have any apparent relationship with levels of stress (see Appendix 5-3).

Initially, slightly significant differences were found among departments in pre-test stress related to School Work (Sig.=0.017, see Appendix 5-4), and Romantic Relationships (Sig.=0.034, see Appendix 5-5). Then, Scheffe Post-Hoc procedure was employed to assess in detail whether any significant differences in stress levels existed among departments and compare their levels of stress. However, the result revealed that

the stress related to School Work and Romantic Relationships did not have any significant differences between any two departments.

With regard to pre-test Career Planning stress which differed among departments ($p=0.019$), the Scheffe Post-Hoc result showed that the stress level of students from Mechanical Engineering Department was slightly significantly lower than that of those in the Information Management Department ($\text{Sig.}=0.049$, see Appendix 5-6). That is to say, the students from Mechanical Engineering Department felt less stressed than those of the Information Management Department in the pre-test stress, in regard to Career Planning. However, the p -value (0.049) is very close to the critical value $p=0.05$, and consequently seems to be a little uncertain to identify differences. Thus, this would not greatly affect the results of this study. Possible reasons for these differences will be presented in the discussion section later.

Another significant difference was found in Financial Problems stress in relation to parental status ($p=0.035$). The results of Scheffe Post-Hoc procedure are shown in the following table:

Table 5-1: Pre-test in Financial Problems stress variable by parental status

Stress variable	Parental status	Mean	St. D	Scheffe Post-Hoc test	Sig.
Financial Problems	Both parents	3.17	1.398	Both < Single	.045
	Single parent	3.62	1.243	Both < Others	.653
	Others	3.63	1.685	Single < Others	1.000

Parental status has three situations: both parents in family, single parent, and others, such as being abandoned or with deceased parents. According to the results, pre-test stress levels in Financial Problems revealed non-significant differences between Both parents and Others, and likewise between Single parent and Others. The stress level of the students from both-parents families were significantly lower than those from single-parent families (Sig.=0.045), i.e. the students with both-parents families felt less stressed than those from single-parent families in relation to Financial Problems.

5.5. Analysis of cognitive changes among groups

In this study, Zhuang Zi's fables were adopted as reading materials. These fables have been categorized according to their content into three main concepts: (1) Discarding Prejudice; (2) Removing Greed, and (3) Forgoing Demands. The higher the scores the participants obtained in the "Philosophical Beliefs toward Stress Coping Inventory, PBSCI" test, the more it is believed that they agreed with Zhuang Zi's concepts. It was necessary to carry out a pre-test to evaluate any differences existing before experimental treatment, to reduce bias from the samples, and also to make sure all groups came from the same target population.

5.5.1. Analysis of level of agreement with Zhang Zi's concepts among groups in the pre-test

In the pre-test, One-Way ANOVA was employed to check for any significant differences among groups in the levels of agreement with Zhuang Zi's concepts before

the experimental treatments were administered (see Appendix 5-7). The results revealed non-significant differences among the groups in the concepts of Discarding Prejudice ($F=2.319$, $Sig.=0.100$) and Removing Greed ($F=0.771$, $Sig.=0.463$). The results showed the existence of only one significant difference among groups, in the Forgoing Demands concept ($F=12.349$, $Sig.=0.000$).

Then, as a further step the Scheffe Post-Hoc procedure was employed to find any statistically significant differences among groups in the Forgoing Demands concept. The results showed that the level of agreement with the Forgoing Demands concept in Group 1 was significantly greater than in Group 3 ($Sig.=0.000$); likewise the students of Group 2 were more in agreement with the Forgoing Demands concept than those of Group 3 ($Sig.=0.003$). This feature might be caused by the issue of sample bias arising from the asymmetrical gender distribution of Group 3. This is an inevitable weakness of the quasi-experimental research. However, no statistically significant difference was found between Group 1 and Group 2. In the total scale, it was shown that there were non-significant differences among groups ($F=2.627$, $Sig.=0.074$), so all three groups can be regarded as coming from the same population.

5.5.2. Analysis of levels of agreement with Zhuang Zi's concepts among groups in the post-test

Analysis of the pre-test data in Appendix 5-7 was followed by analysis of the post-test data in Appendix 5-8, in order to find differences between these two sets of

data, i.e., investigate cognitive changes between pre-test and post-test data. Analysis of Variance (ANOVA) was applied to examine any significant differences among the three groups after administering the 12-session experimental treatments. The experimental groups and the control group were found to have statistically significant differences in agreement levels on all concepts, Discarding Prejudice ($F=52.549^{***}$, $\text{Sig.}=0.000$), Removing Greed ($F=41.700^{***}$, $\text{Sig.}=0.000$), and Forgoing Demands ($F=61.945^{***}$, $\text{Sig.}=0.000$). Also, in aggregating these three concepts into a total scale, a strongly significant difference was found ($F=75.448^{***}$, $\text{Sig.}=0.000$).

Further, through the Scheffe Post-Hoc procedure, the results of three concept scales and the total scale of Zhuang Zi's concepts show that agreement in Group 1 was statistically significantly higher than in Group 2 ($\text{Sig.}=0.000$), the level of agreement for Group 1 were statistically significantly higher than in Group 3 ($\text{Sig.}=0.000$), and agreement for Group 2 was significantly higher than in Group 3 ($\text{Sig.}=0.000$). The only exception was for the Removing Greed concept, where there was a non-significant difference in the relationship between Group 2 and Group 3 ($\text{Sig.}=0.080$), i.e., the levels of agreement with the Removing Greed concept between the self-help approach group and the control group had non-significant differences. Overall, the bibliotherapy group had the greatest level of agreement with Zhuang Zi's concepts, i.e., Zhuang Zi's concepts had the deepest influence on Group 1 (the treatment group), less on Group 2 (the self-help approach), and the least on Group 3 (the control group).

5.5.3. Analysis of cognitive change between pre-test and post-test

In order to identify the efficacy of bibliotherapy applying Zhuang Zi's fables, the results from the pre-test and the post-test were separately compared for each group. In Group 1, the concepts of Discarding Prejudice ($t=-14.802^{***}$, $\text{Sig.}=0.000$), Removing Greed ($t=-12.874^{***}$, $\text{Sig.}=0.000$), and Forgoing Demands ($t=-11.783^{***}$, $\text{Sig.}=0.000$) all showed significant difference, with the detailed outcomes as shown in the following table:

Table 5-2: Analysis of cognitive change between pre-test and post-test in Group 1 (bibliotherapy group)

Concept scale	Test	Mean	Std. D	t	Sig.
Discarding Prejudice	pre-test	45.33	4.964	-14.802	.000
	post-test	52.87	4.488		
Removing Greed	pre-test	49.52	5.958	-12.874	.000
	post-test	57.52	6.941		
Forgoing Demands	pre-test	59.74	5.552	-11.783	.000
	post-test	67.39	7.617		
Total	pre-test	154.60	10.711	-17.499	.000
	post-test	177.78	16.352		

As the results show, all the agreement levels in the post-test are statistically significantly greater than those of the pre-test. This means the participants had been influenced by Zhuang Zi's three concepts through the bibliotherapy approach, Suggesting that this bibliotherapy intervention delivered in this study is feasible and the research

design is valid.

For Group 2, the post-test levels of agreement in both the Discarding Prejudice and Forgoing Demands concepts were statistically significantly different from those of the pre-test (see Appendix 5-9). Although the level of agreement with the Removing Greed concept in the post-test was greater than in the pre-test, the change was not enough to reach statistical significance ($t=-1.835$, $\text{Sig.}=0.069$). Thus, it seems to be difficult to reduce one's desires though the self-help approach. The other two concepts of Discarding Prejudice ($t=-3.919^{***}$, $\text{Sig.}=0.000$) and Forgoing Demands ($t=-5.745^{***}$, $\text{Sig.}=0.000$) can be significantly changed by self-help approach, but the change was not as great as for Group 1. However, the effects of the self-help approach are still supported, as shown in the strong significant difference in favour of this group on the total stress levels ($t=-5.448^{***}$, $\text{Sig.}=0.000$).

As the results show for Group 3, there was no significant cognitive change in any of the three concepts (see Appendix 5-10). Changes in level of agreement with Zhuang Zi's concepts between pre-test and post-test were irregular. Agreement increased a little for the Discarding Prejudice and Forgoing Demands concepts, but decreased a little for the Removing Greed concept. It is difficult to keep a no-change condition in the control group, especially in a study on such philosophical variables.

In sum, only the experimental groups (Group 1 and Group 2) displayed significant changes between the pre-test and the post-test. The levels of agreement with Zhuang

Zi's concepts changed non-significantly in the control group (Group 3) between the pre-test and the post-test.

5.6. Analysis of stress levels among groups

First, it is necessary to check if there was any difference among groups in order to prevent any sample bias that might influence the effects of the experiments. This was done by employing the Analysis of Variance (ANOVA) to examine the pre-test stress level means among the three groups.

5.6.1. Analysis of stress levels among groups in the pre-test

The results of the pre-test (see Appendix 5-11) indicated the pre-test stress level means for each of the three groups in each stress level variable. The stress level means for the three groups in the Career Planning variable were the only one to show statistically significant difference ($F=3.330^*$, $Sig.=0.037$). In the Career Planning and Financial Problems variables, Group 3 had the lowest mean stress among the groups. In contrast, Group 3 had the highest mean stress level among the groups for the other five stress level variables, i.e., School Work, Personal Health, Interpersonal Relationships, Romantic Relationships, and Family Communication. The features of this data will be discussed in a later section.

Further, in the Scheffe Post-Hoc Procedure in the Career Planning stress, non-significant difference was found between Group 1 and Group 2 ($Sig.=0.377$), and likewise between Group 2 and Group 3 ($Sig.=0.556$). The only significance is that the

Career Planning stress of students in Group 1 was greater than in Group 3 (Sig.=0.039). However, this slight difference does not strongly influence the total results (F=0.922, Sig.=0.399). In summary, the stress level means of all three groups before treatment are not significantly different, which means they would not bring protrudent bias before the treatment.

5.6.2. Analysis of stress levels among groups in the post-test

The stress levels found by ANOVA in the post-test after administering the experiment were expected to show significant differences among groups in line with the research hypothesis that students in the experimental groups would experience significantly reduced stress after bibliotherapy, but the control group would not. However, in the post-test results (see Appendix 5-12), out of seven stress level variables only four were statistically significant. Three non-significant differences among groups were found after bibliotherapy, which included differences in stress related to Personal Health (F=2.942, Sig.=0.054), Interpersonal Relationships (F=2.966, Sig.=0.053), and Family Communication (F=1.494, Sig.=0.226). In particular, the stress level means of the three groups, with or without treatment, were very close with regard to Personal Health and Interpersonal Relationships.

From the results of the post-test, it is clearly shown that there are four significant differences among groups including the stress related to School Work (F=6.458**, Sig.=0.002), Romantic Relationships (F=10.993***, Sig.=0.000), Career Planning

($F=23.206^{***}$, $Sig.=0.000$), and Financial Problems ($F=32.126^{***}$, $Sig.=0.000$). Also, the overall stress level, as the sum of stress levels of seven kinds of stress was statistically significant ($F=25.642^{***}$, $Sig.=0.000$).

The Scheffe Post-Hoc procedure revealed that for the School Work stress variable, there was a non-significant difference between Group 1 and Group 2 ($Sig.=0.731$). The students in Group 1 were significantly less stressed in relation to School Work than those of Group 3 ($Sig.=0.002$), and likewise those of Group 2 were significantly less stressed in relation to School Work than those of Group 3 ($Sig.=0.041$).

With regard to Romantic Relationships, there was a non-significant difference in mean score between Group 1 and Group 2 ($Sig.=0.784$), but the students of Group 1 were significantly less stressed than those of Group 3 ($Sig.=0.000$), while those of Group 2 are significantly less stressed than those of Group 3 ($Sig.=0.002$).

Stress levels related to Career Planning were significantly lower among the students of Group 1 than those of Group 2 ($Sig.=0.001$), and likewise the students of Group 1 were significantly less stressed than those of Group 3 ($Sig.=0.000$), and those of Group 2 were significantly less stressed than those of Group 3 ($Sig.=0.025$). This finding confirms the hypothesis that Group 1 treatment exposure is more effective in stress reduction compared to Group 2 treatment exposure, and both treatments are more effective than no exposure, as experienced by Group 3.

In the Financial Problems stress level variable, the students of Group 1 showed

significantly less stress than both those of Group 2 (Sig.=0.002), and than those of Group 3 (Sig.=0.000), while those of Group 2 were significantly less stress than those of Group 3 (Sig.=0.000). These results confirm the prediction that Group 3 would have the highest mean level of stress among groups. Group 2 would have less, and Group 1 the least.

For overall stress, as the sum of seven stress levels, the students of Group 1 showed significantly less stress than those of Group 2 (Sig.=0.015) and than those of Group 3 (Sig.=0.000), while those of Group 2 showed significantly less stress than those of Group 3 (Sig.=0.000). This finding confirms the hypothesis that Group 1 with full treatment exposure would experience less stress compared to Group 2 with reduced treatment exposure, and that both treatment groups would have less stress compared to Group 3.

Overall, it was found that the bibliotherapy group experienced the greatest stress reduction and showed the greatest level of agreement with Zhuang Zi's concepts, i.e., Zhuang Zi's concepts have the deepest influence on Group 1 (the treatment group), less on Group 2 (the self-help approach), and the least on Group 3 (the control group). Thus, the results supports the research hypothesis.

5.6.3. Analysis of stress levels between pre-test and post-test

In order to investigate whether any effects of stress reduction resulted from study of Zhuang Zi's concepts, it is necessary to make a comparison between post-test and

pre-test stress levels. As shown in the results for Group 1, there were non-significant differences in three dimensions of stress: Personal Health, Romantic Relationships, and Family Communication. Although these measures in the post-test were all lower than those in the pre-test, the reduction in stress is not enough to reach the level of significance. Thus, these kinds of stress failed to be significantly reduced through bibliotherapy with Zhuang Zi's concepts. These results may suggest limitations to the scope and power of the bibliotherapeutic approach and Zhuang Zi's concepts, which will be explored in depth in a late discussion section.

Significant stress reduction after bibliotherapy was found for Group 1 in the following dimensions of stress: School Work, Interpersonal Relationships, Career Planning, Financial Problems, and total stress. The analysis is as follows:

Table 5-3: Analysis of difference in stress levels between pre-test and post-test for

Group 1 (bibliotherapy group)

Stress	Test	N	Mean	Std. D	t	Sig.
School Work	pre-test	136	3.26	1.063	3.634	.000
	post-test	136	2.82	1.104		
	Reduction in stress level	136	0.44			
Personal Health	pre-test	136	2.54	1.039	1.794	.075
	post-test	136	2.38	1.025		
	Reduction in stress level	136	0.16			
Interpersonal Relationships	pre-test	136	2.06	1.038	4.495	.000
	post-test	136	1.63	.718		
	Reduction in stress level	136	0.43			
Romantic Relationships	pre-test	136	2.15	1.079	1.962	.052
	post-test	136	1.94	1.045		
	Reduction in stress level	136	0.21			
Family Communication	pre-test	136	2.15	1.238	1.924	.056
	post-test	136	1.93	.971		
	Reduction in stress level	136	0.22			
Career Planning	pre-test	136	3.60	1.137	8.727	.000
	post-test	136	2.39	1.187		
	Reduction in stress level	136	1.21			
Financial Problems	pre-test	136	3.48	1.322	11.758	.000
	post-test	136	1.87	1.121		
	Reduction in stress level	136	1.61			
Total Stress (total scores of seven mean stress levels)	pre-test	136	19.24	4.685	9.821	.000
	post-test	136	14.95	4.463		
	Reduction in stress level	136	4.29			

The ranking among the effect in reduction of levels of stress is:

Financial Problems > *Career Planning* > *School Work* > *Interpersonal Relationships* > Family Communication > Romantic Relationships > Personal Health.

© italic words mean the difference reaches significant level.

The stress seems to be reduced in the most of the dimensions topics which are related to career pursuits. So it appears that bibliotherapy with Zhuang Zi's fables can effectively ameliorate students' stress related to the drive for outward achievement, but they seem to be less effective on personal issues and close relationships.

As shown in the results for Group 2 (see Appendix 5-13), a significant stress reduction occurred in regard to the variables of Career Planning ($t=3.112^{**}$, $\text{Sig.}=0.002$) Financial Problems ($t=4.106^{***}$, $\text{Sig.}=0.000$), and total stress scale ($t=3.363^{**}$, $\text{Sig.}=0.001$). Other stress level variables did not reveal significant differences. For what reasons the intervention contributed to significant differences in only two stress level variables needs further discussion.

There is an interesting finding that the mean stress level of the post-test ($M=2.04$) in Family Communication stress variable of Group 2 is very slightly higher than in the pre-test ($M=2.03$). This implies the self-help approach seems not to work in dealing with Family Communication stress.

In Group 3 with no exposure to bibliotherapy, one would expect similar results between pre-test and post-test. However, the results (see Appendix 5-14) showed a significant reduction of stress in Interpersonal Relationships ($t=3.049^{**}$, $\text{Sig.}=0.003$). We are not sure what caused this stress reduction in the interval between pre-test and post-test, and possible factors will be explored in discussion section. Family Communication stress was also reduced but only a little. Other stress level means were

higher in the post-test than in the pre-test, showing that the other five stress level variables were not reduced.

In sum, bibliotherapy applying Zhuang Zi's fables showed effectiveness in reducing stress level in the dimensions of School Work, Interpersonal Relationships, Career Planning, Finance Problems, and total stress scales. However, it does not mean that bibliotherapy is effective for all people or in all problems. It still relies on the appropriateness of the reading materials for individual needs, and how to apply it.

5.7. The effects of stress reduction

Each group's stress levels in the pre-test and post-test have been separately analysed in the previous sections. Next, we can further investigate the effects on stress reduction among groups. However, we need to know whether the experiment performed effectively in producing impacts as a result of reading Zhuang Zi's fables before checking the effects of stress reduction. Thus, investigation is the subject of the following section:

5.7.1. The analysis of the increase of agreement levels with Zhuang Zi's concepts among groups

Comparing the increase of each group's mean agreement level is more relevant than the absolute post-test agreement levels. The results of these analyses are shown in the following table:

Table 5-4: The differences among groups in the increase of agreement with Zhuang

Zi's concepts							
Concept variables	Group	Mean	SD	ANOVA	Sig.	Scheffe	Sig.
				F-value	Post-Hoc test		
Increase in agreement with Discarding Prejudice	Gp1	7.54	5.938	48.513	.000	Gp1 > Gp2	.000
	Gp2	2.35	6.084			Gp1 > Gp3	.000
	Gp3	.36	5.575			Gp2 > Gp3	.052
Increase in agreement with Removing Greed	Gp1	8.00	7.247	49.012	.000	Gp1 > Gp2	.000
	Gp2	1.50	8.269			Gp1 > Gp3	.000
	Gp3	-.72	5.695			Gp2 > Gp3	.085
Increase in agreement with Forgoing Demands	Gp1	7.65	7.568	20.942	.000	Gp1 > Gp2	.006
	Gp2	4.37	7.718			Gp1 > Gp3	.000
	Gp3	1.15	7.936			Gp2 > Gp3	.012
Increase in Total scores of three concepts	Gp1	23.18	15.451	74.825	.000	Gp1 > Gp2	.000
	Gp2	8.21	15.301			Gp1 > Gp3	.000
	Gp3	.79	12.302			Gp2 > Gp3	.001

According to the above results, the increase in agreement with the Discarding Prejudice concept for Group 1 is significantly greater than for Group 2; and also greater for Group 1 than for Group 3. The same outcome is found for the Removing Greed concept. Thus, the students of Group 1 experienced the greatest increase in agreement level among the groups in relation to Discarding Prejudice and Removing Greed. As for

Forgoing Demands and the total concept scale, Group 1 shows a significantly greater increase than Group 2; and also is a significantly greater increase than Group 3; while Group 2 shows a significantly greater increase than Group 3. The following bar chart presents the increase in levels of agreement with Zhuang Zi's concepts for each group.

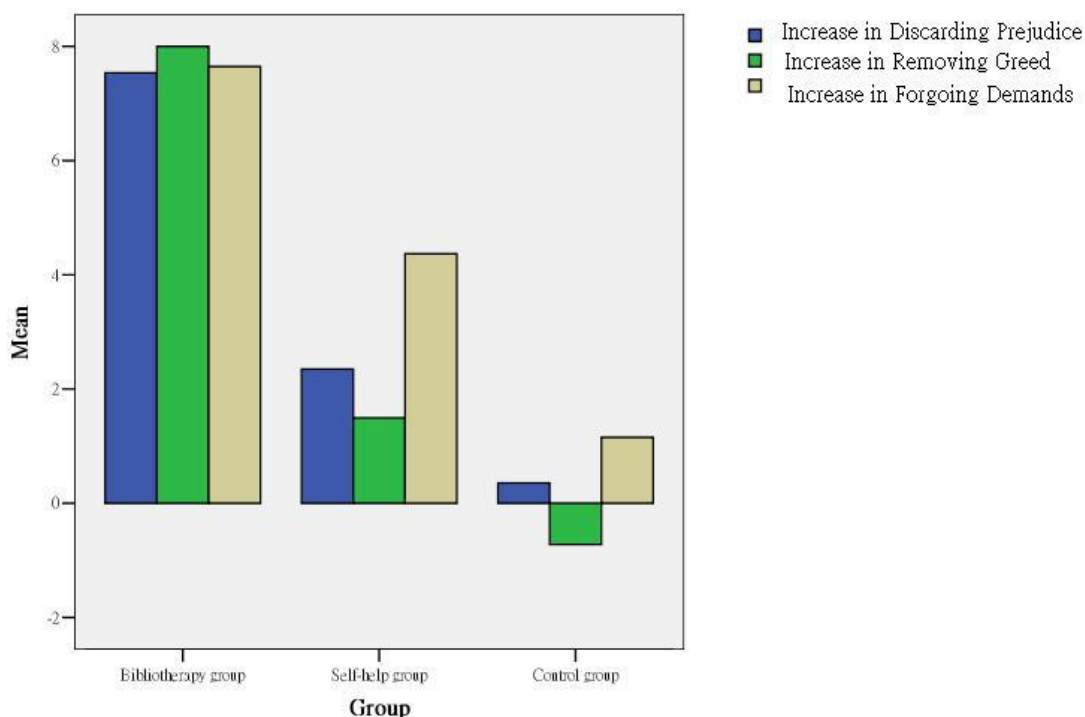


Figure 5-2: The increase of levels of agreement with Zhuang Zi's concepts: comparison among groups

As the above figure shows, Zhuang Zi's concepts had the most effect in the bibliotherapy group (Group 1), less in the self-help group (Group 2), and the least in the control group (Group 3). This effectively differentiates the effects of different exposure levels in the experiment, and hence confirms the hypothesis in this study.

5.7.2. The effects of stress reduction among groups

Due to a slightly significant difference in Career Planning stress (Sig.=0.037) among groups found in the pre-test, these three groups were not at the same level before the experiment. Although this is the pre-existing fact, each group can be compared in terms of difference between its pre-test and post-test stress levels, if the reduction achieves a statistically significant level, that can still show the effects of the intervention in stress reduction. The following table shows the details of stress reduction level among groups:

Table 5-5: A comparison among groups in the level of stress reduction

Stress variable	Group	Mean	SD	ANOVA	Sig.	Scheffe	Sig.
				F-value		Post-Hoc	
Stress reduction in School Work	Gp1	.45	1.439	4.498	.012	Gp1 > Gp2	.127
	GP2	.09	1.147			Gp1 > Gp3	.017
	Gp3	-.06	1.433			Gp2 > Gp3	.744
Stress Reduction in Personal Health	Gp1	.17	1.099	1.961	.142	Gp1 > Gp2	.958
	GP2	.13	1.258			Gp1 > Gp3	.168
	Gp3	-.11	.975			Gp2 > Gp3	.327
Stress Reduction in Interpersonal Relationships	Gp1	.43	1.106	1.414	.245	Gp1 > Gp2	.253
	GP2	.18	1.046			Gp1 > Gp3	.888
	Gp3	.36	1.190			Gp2 < Gp3	.543
Stress Reduction in Romantic Relationships	Gp1	.21	1.224	1.451	.236	Gp1 > Gp2	1.000
	GP2	.20	1.346			Gp1 > Gp3	.306
	Gp3	-.05	1.234			Gp2 > Gp3	.359

Stress Reduction	Gp1	.22	1.337	1.005	.367	Gp1 > Gp2	.377
in Family	GP2	-.01	1.233			Gp1 > Gp3	.717
Communication	Gp3	.09	1.183			Gp2 < Gp3	.860
Stress Reduction	Gp1	1.21	1.621	28.972	.000	Gp1 > Gp2	.000
in Career	GP2	.42	1.361			Gp1 > Gp3	.000
Planning	Gp3	-.20	1.257			Gp2 > Gp3	.009
Stress Reduction	Gp1	1.61	1.597	35.033	.000	Gp1 > Gp2	.000
in Financial	GP2	.73	1.800			Gp1 > Gp3	.000
Problems	Gp3	-.07	1.160			Gp2 > Gp3	.001
Stress Reduction	Gp1	4.29	5.099	24.347	.000	Gp1 > Gp2	.000
in total scores of	GP2	1.74	5.245			Gp1 > Gp3	.000
seven stress	Gp3	-.04	3.990			Gp2 > Gp3	.032

Because the cognitive changes related to Zhuang Zi's concepts were significant in the experimental groups, it can be reasonably inferred Zhuang Zi's concepts had some effects on the stress reduction. With regard to the reduction of stress levels, there were significant differences in Career Planning and Financial Problem among all the groups. As expected, the stress reduction for Group 1 was the greatest among all groups, Group 2 showed a smaller reduction, and Group 3 the least. In addition, in the only significant difference found in relation to School Work, the stress reduction of Group 1 was significantly greater than that of Group 3.

It is an interesting finding that Group 1 (M=0.21) and Group 2 (M=0.20) exhibited almost the same level of stress reduction in Romantic Relationships (mean difference=0.010, Sig.=1.000). Thus, there is almost no difference in the effect of stress

reduction between bibliotherapy and the self-help approach in dealing with stress in romantic affairs.

Overall, the above results show that bibliotherapy is more effective in reduction of stress than the self-help approach; in turn, self-help is more effective than no therapy. This result confirms the hypothesis of this study.

5.8. The correlation between cognitive changes and stress reduction

In this section, we first investigate whether philosophical concepts correlate with stress reduction, i.e., to check the correlational relationships between different concepts and stress levels. Then, explore what kinds of stress are significantly reduced following different types of experimental exposure and acceptance of the three main concepts in Zhuang Zi's fables. Further, each of the three main concepts contains several detailed concepts, which will be termed "sub-concepts", which were identified on the empirical basis of factor analysis as described in the methodology chapter. The relationships between these sub-concepts and stress levels will be explored in detail.

5.8.1. The correlation between the levels of agreement with Zhuang Zi's three main concepts and the measure of stress level in the post-test

After 12 weeks of bibliotherapy, all the data had to be analysed, and integrated into an informative conclusion, especially the relationship between concept and stress level variables. It is crucial thing to know whether or not, bibliotherapy worked in this study, and produced differences from the control group; if so, to investigate further what

concepts are correlated with Total Stress. “Total Stress” is the sum of the totals for all seven of the stress level variables, which were added together to yield a total stress level for each participant. This data was then correlated with levels of agreement with each of Zhuang Zi’s concepts for each participant.

Within Group 1, all the concepts were negatively correlated and statistically significant with the total scores of stress. This indicates that the greater the agreement with Zhuang Zi’s concepts, the lower the level of stress, and vice versa. In Group 2, only one of the correlations was statistically significant (Forgoing Demands x Total Stress), but this correlation value was very low ($r=-0.201$, $\text{Sig.}=0.042$). This would indicate that approximately 4% of the variance between these two variables was accounted for. Lastly, there was no significant correlation in Group 3.

In sum, the self-help approach seems not to be as powerful as bibliotherapy in the interaction between the agreement levels of Zhuang Zi’s concepts and total stress level; moreover, Group 3 (no intervention) did not have any correlations between Zhuang Zi’s concepts and stress level in the post-test. The details of the results are presented in the following table:

Table 5-6: The correlation between the agreement levels of Zhuang Zi’s main concepts and stress level in the post-test

		Total Stress (Total scores of Seven Stress)		
		Group 1	Group 2	Group 3
Discarding Prejudice	r-value	-.535**	-.145	.026
	p-value	.000	.144	.791
Removing Greed	r-value	-.417**	-.015	.070
	p-value	.000	.878	.480
Forgoing Demands	r-value	-.415**	-.201*	-.120
	p-value	.000	.042	.223
Total Scores of three concepts	r-value	-.517**	-.147	-.012
	p-value	.000	.138	.904

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

5.8.2. The correlation between the increase of agreement with Zhuang Zi’s three main concepts and the measure of stress reduction

Within the bibliotherapy group (Group 1), there were significant positive correlations between the stress reduction in Career Planning and the increase in acceptance of all concepts (Discarding Prejudice, Removing Greed, Forgoing Demands, and Total concept). The greater the increase in acceptance of Zhuang Zi’s concepts, the more effect was seen in stress reduction in Career Planning. There was a significant positive correlation between the increase in agreement with the Removing Greed concept and stress reduction in Financial Problem. The greater the increase in

acceptance of Removing Greed, the greater the effect seen in stress reduction in Financial Problems. The following table shows the detailed results of the analysis:

Table 5-7: The correlation between cognitive changes of acceptance of Zhuang Zi's main concepts and the measure of stress reduction in Group 1

		Reduction in School Work	Reduction in Personal Health	Reduction in Inter Personal Relation Ships	Reduction in Romantic Relation ships	Reduction in Family Communi cation	Reduction in Career Planning	Reduction in Financial Problems	Reduction in Total Stress
Increase in	r-value	.020	.129	.150	.051	.035	.183*	.092	.174*
Discarding	p-value	.816	.134	.082	.556	.683	.033	.288	.042
Prejudice									
Increase in	r-value	.050	.153	.087	.041	-.048	.179*	.215*	.187*
Removing	p-value	.565	.075	.315	.636	.578	.037	.012	.029
Greed									
Increase in	r-value	.063	.054	.078	.100	.057	.191*	.023	.153
Forgoing	p-value	.467	.529	.365	.247	.511	.026	.792	.075
Demands									
Increase in	r-value	.062	.148	.137	.088	.019	.248**	.147	.230**
total scores	p-value								.007
of three		.474	.085	.113	.310	.828	.004	.087	
concepts									

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Overall, the change in agreement with Discarding Prejudice, Removing Greed, and total concept significantly was positively correlated with the reduction in Total Stress.

Although the result was non-significant, the increase in agreement with Forgoing Demands was still positively correlated with the reduction in Total Stress. The following scatter chart shows the correlations between increase in agreement with Zhuang Zi's main concepts and the indication of stress reduction:

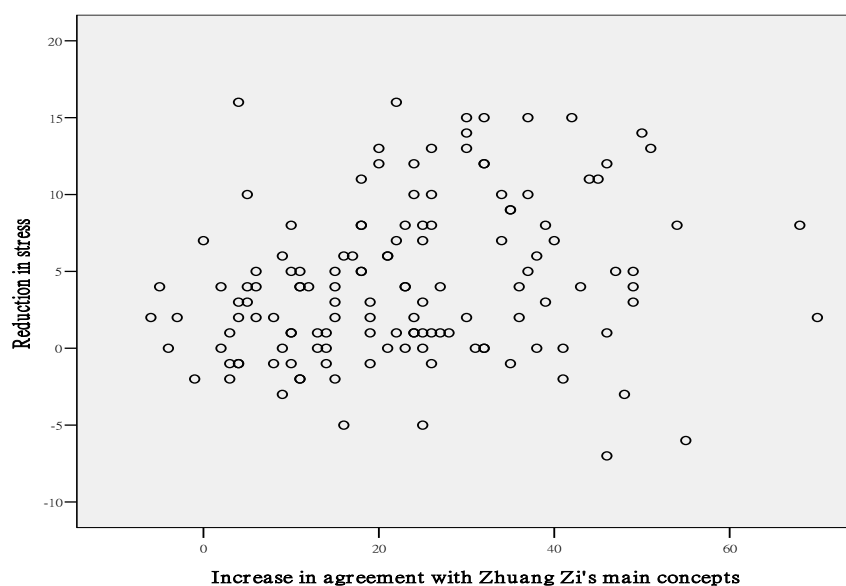


Figure 5-3: The correlations between increase in agreement with Zhuang Zi's main concepts and the measure of stress reduction in Group 1

Within Group 2, there was no significant correlation (see Appendix 5-15). Surprisingly, the increase of acceptance of Zhuang Zi's main concepts seemed not to be related to a reduction in stress. However, we can find several significant positive correlations between the increase of agreement with certain sub-concepts and stress reduction, which will be explained in the next section. Thus, the increase of Zhuang Zi's concepts more or less affected the stress reduction in Group 2.

Within Group 3, unexpectedly the increases in agreement with Discarding Prejudice and Total Concepts had significant positive correlations with stress reduction in School Work (see Appendix 5-16). These correlations were not caused by the experiment and may have other potential causes. It is difficult to control completely all the variables in the control group in such a social dimension. We do not have sufficient evidence to explain this result so far, this would be an issue to be explored in future research. In fact, there were greater or lesser positive correlations between the increase in agreement with Zhuang Zi's main concepts and the indication of stress reduction in all three groups. The three groups' detailed correlations are presented in the following scatter chart:

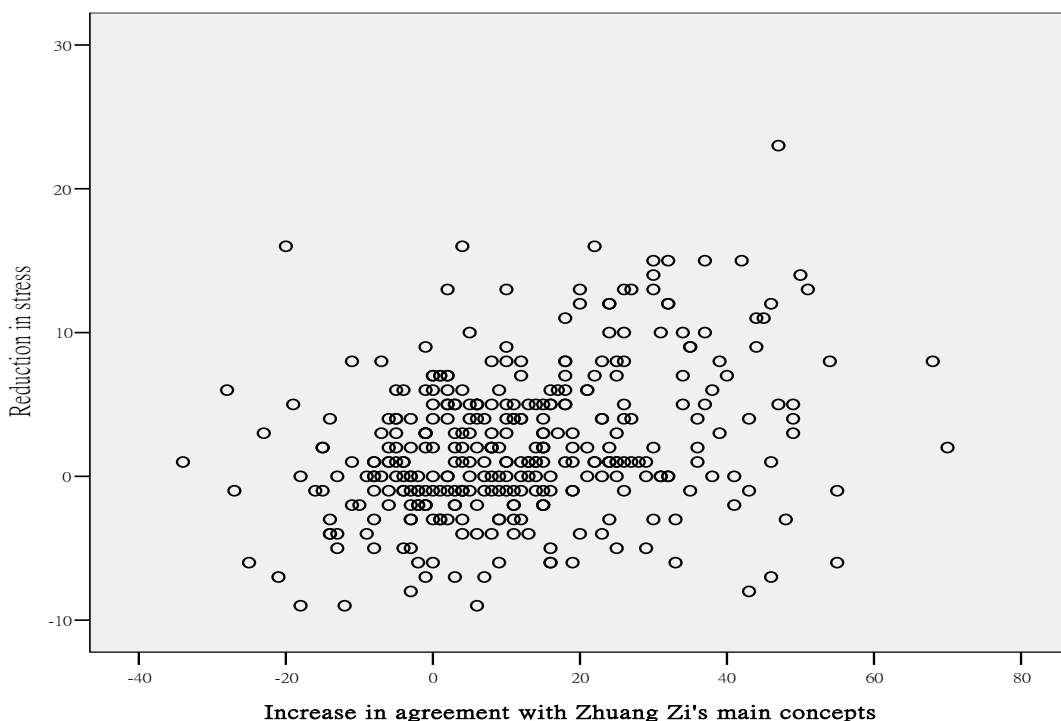


Figure 5-4: The correlation between the increase in agreement with Zhuang Zi's main concepts and the measure of stress reduction in whole samples

5.8.3. The correlation between cognitive changes in agreement with Zhuang Zi's sub-concepts and the measure of stress reduction

In the methodology chapter, it was mentioned that each of Zhuang Zi's main concepts is composed of several sub-concepts which were identified on the basis of factor analysis in the pilot study. These sub-concepts present more detailed and concrete meanings, and help to clarify elements of Zhuang Zi's philosophy.

Within Group 1, the increase of agreement with Zhuang Zi's three main concepts was not significantly correlated to the stress reduction in Personal Health, but the increase of agreement with the Quit Stubbornness sub-concept showed a significant positive correlation with stress reduction in Personal Health (Sig.=0.010). To offer an analogy, this situation is like the case where the mean English score for a class is Grade B, but, we find some individuals in the class who failed in English because the mean score reflects the sum of a variety of positive and negative scores. The sub-concept analysis was carried out independently from the main concepts. Individual sub-concepts may have a significant correlation with the mean stress level, while at the same time the relevant main concept's mean score may not significantly correlate with the same stress variable, because the sub-concepts may have positive or negative mean scores which in sum result in a different correlation with stress for their main concept. Thus, the increase of acceptance of the Quit Stubbornness sub-concept can be positively correlated to the stress reduction in Personal Health. The detailed results of correlation

analysis are in Appendix 5-17.

Next, stress reduction of Career Planning was significantly correlated to the increase in agreement with Quit Stubbornness (Sig.=0.038), Manage Emotions (Sig.=0.036), Free the Spirit (Sig.=0.018), and Accept Life's fate (Sig.=0.042). With regard to Financial Problem, stress reduction had significant correlations with the increase in agreement with Nourish Health (Sig.=0.005) and Manage Emotions (Sig.=0.025). Finally, the reduction in total stress was positively correlated with the increase in agreement with Quit Stubbornness (Sig.=0.019), Manage Emotions (Sig.=0.003), and Free the Spirit (Sig.=0.018).

Within Group 2, the increase in agreement with the Treat Others Equally sub-concept was separately correlated with stress reduction in Romantic Relationships (Sig.=0.016), Family Communication (Sig.=0.045), and Total Stress (Sig.=0.050). The increase of agreement with Manage Emotions was significantly correlated with stress reduction in Family Communication (Sig.=0.044), and also Career Planning (Sig.=0.041). Lastly, the increase in agreement with the Accept Life's Fate sub-concept was correlated with Financial Problems (Sig.=0.006). For the self-help group, the correlation coefficients between the increase in sub-concept agreement and the measure of stress reduction seem to be lower than for the bibliotherapy group (see Appendix 5-18).

Although we did not implement any intervention in Group 3, there still occurred a

significant correlation between the increase of agreement with the Accommodate to Nature sub-concept and reduction in Romantic Relationships stress (Sig.=0.028). This correlation analysis table is reported in the Appendix 5-19. We are not sure of the explanation for this outcome, but it may reveal some useful information and would be worth exploring in a future study.

5.9. The prediction of stress level

In the investigation of correlations between Zhuang Zi's concepts and stress levels, several significant correlations were found. In general, the higher the correlation coefficient between two variables, the more probable it is that a relationship of causality exists between the variables. Therefore, in this section, we want to explore whether students' stress levels had been influenced by Zhuang Zi's concepts, and what concepts could influence the stress levels. For the purpose of the analysis, the independent variables (i.e., predictor variables) are Zhuang Zi's concepts. The dependent variable (i.e., outcome variable) is stress level.

Stepwise multivariate regression procedure was used to analyse the causality among variables; each regression model can include several different predictors (causers). By this procedure, only the analysis for Group 1 produced any regression models. These shown in the following table:

Table 5-8: Model Summary of Group 1 *

Model	Predictors	Adjusted R Square	Durbin-Watson
1	Quit Stubbornness	.267	1.840
2	Quit Stubbornness, Be Optimistic in Adversity	.325	
3	Quit Stubbornness, Be Optimistic in Adversity, Treat Others Equally	.350	

* Dependent Variable: Stress level

Next, the researcher needs to choose a best-fit regression model to represent the probable causality in this study. Thus, we also can predict students' stress level outcome if we know their responses on the variables in the best-fit regression model. The best-fit regression model is chosen based on the following comprehensive criteria:

1. The value of Adjusted R Square should be above 0.30: it means that the possibility of error can be reduced to at least 30 %, which can be considered an acceptable level for an initial study.
2. The smaller the number of predictors, the better the results would be: focusing on a few most important predictors is better than posing several predictors. We can control the widest range of conditions if we can identify the most influential predictors. By contrast, if we choose a model with many predictors than we may be confused, and distracted away from the real predictors.

3. The Durbin-Watson procedure is a colinear test for which the safe range of values is between 2 ± 0.5 : if the value is out of this safe range, that means it would have the problem of being colinear with more than one equation.
4. The p-value of ANOVA and the coefficients of regression both need to be below 0.05 in order to achieve a reliable level of significance.
5. The scatter plot of the standardized residual of the best-fit regression model must be dispersive without any clear shapes, such as a straight or curved line. Otherwise, this would imply that there are still some important factors that have not been considered. If the standardized residual plot contains discernible shapes it fails to explain this model.

As for the results of the analysis, three models are generated in this multiple regression analysis, and there is no colinear problem because the Durbin-Watson value is 1.840, within the safe range. In Model 1, the Adjusted R Square is below 0.30 and so this model is rejected. In Model 2 with two predictors, the Adjusted R Square is 0.325, and in Model 3 with three predictors, the Adjusted R Square is 0.350. Model 3 can reduce the obscure situation to 35%, but this only improves the fit by 2.5% compared to Model 2, and Model 3 has one more predictor than Model 2. It is most important to find the target and the most influential predictor; likewise, it is more powerful to focus on key points at issue rather than carpet interviewing during counselling. Therefore, the equation of Model 2 is the best-fit to explain the causality and predict stress levels.

Multiple regression analysis results in the regression coefficients and regression equation of Group 1 as follows:

Table 5-9: The regression coefficients of Group 1

	Unstandardized Coefficients (Beta)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	38.288	2.881		13.288	.000
Quit Stubbornness	-1.297	.208	-.457	-6.242	.000
Be Optimistic in Adversity	-.485	.138	-.258	-3.521	.001

Dependent Variable: Stress level in the post-test

The stress level = $-0.457 \times \text{Quit Stubbornness} - 0.258 \times \text{Be optimistic in adversity}$

As the results, we can predict reduction of 0.715 units stress if one can increase the acceptance of Quit Stubbornness by 1 unit and Be Optimistic in Adversity by 1 unit.

Partial regression plots shown are for each separately as follows:

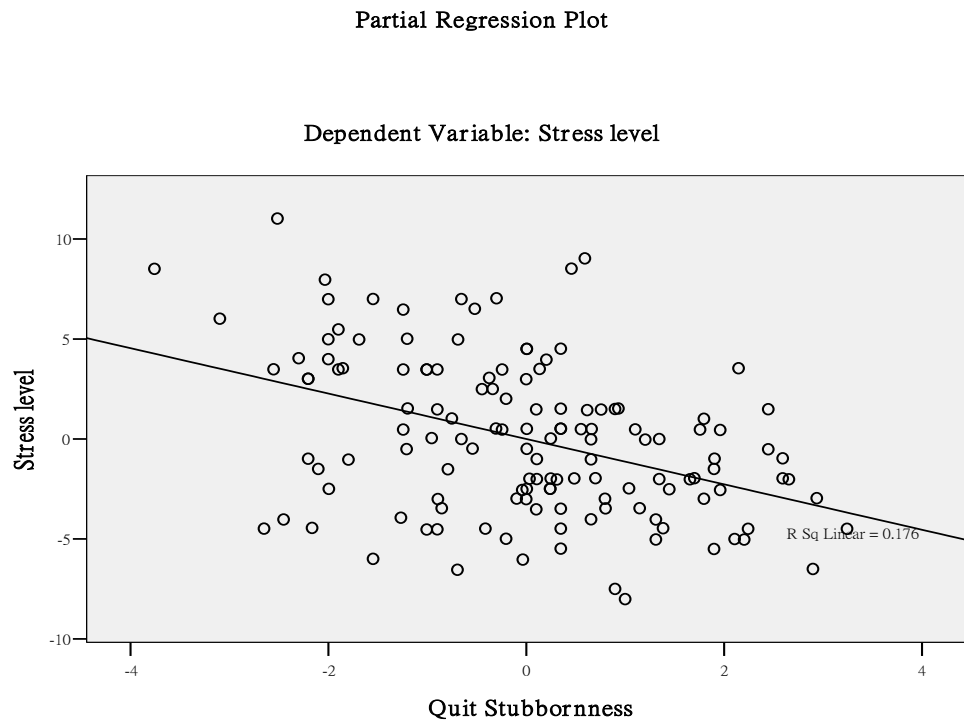


Figure 5-5: The partial regression plot of stress level and Quit Stubbornness

Partial Regression Plot

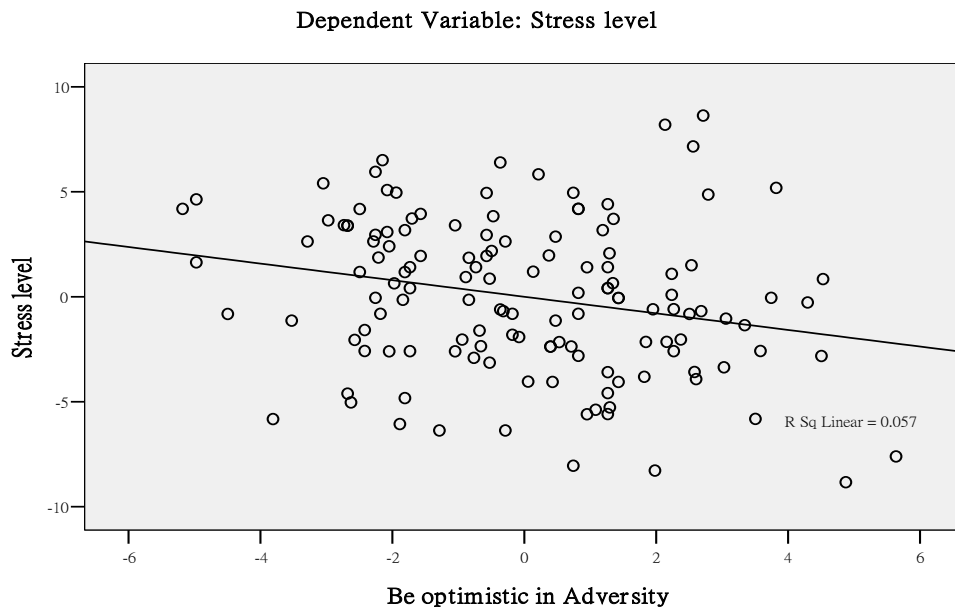


Figure 5-6: The partial regression plot of stress level and Be Optimistic in Adversity

The results of ANOVA of linear regression in Group 1 are shown in the following table:

Table 5-10: ANOVA of linear regression in Group 1

Source of Variance	df	Sum of Squares	Mean Square	F	Sig.
Regression	2	900.003	450.002	33.461	.000
Residual	133	1788.636	13.448		
Total	135	2688.640			

$R^2=0.335$, Adjusted $R^2=0.325$

Predictors: the level of agreement with “Quit stubbornness” and “Be Optimistic in Adversity” in the post-test

Dependent Variable: Stress levels in the post-test

As for the residual of the feasible regression model, the scatter plot of the standardized residuals must be symmetrical and have a normal distribution, whose spread is scattered without any certain shape, i.e., $\mu=0.00000$, $\Sigma E_i=0$. This means all

independent variables are well controlled and the effect of the real factors has been extracted. The residual graph of this regression model in Group 1 conforms to the criteria of acceptable distribution. The details are as follows:

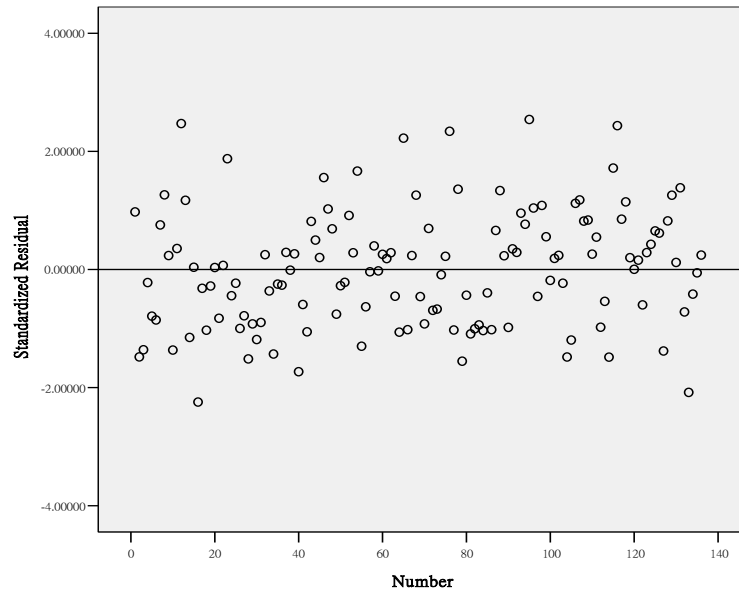


Figure 5-7: The residual graph of the regression model applied to Group 1

From the analyses in the previous sections, it can be seen that they conform to the hypothesis of this study that Zhuang Zi's concepts can help reduce students' stress level. Here, we are informed further what the most influential concepts in reducing stress are. In sum, if the students accept the Quit Stubbornness and Be Optimistic in Adversity concepts that would greatly help their stress reduction.

5.10. The analysis of interpersonal behaviour

Cannon (1929) proposed his famous "Fight-or-Flight Response" theory that animals react by fighting or fleeing when they are threatened. People may react with either aggression or withdrawal behaviour when they are under stress or threatened.

Besides the above two types of behaviours, there is another type of behaviour in the IBS (Interpersonal Behaviour Survey), Assertive Behaviour. In order to explore any relationships among interpersonal behaviour, stress levels, and Zhuang Zi's concepts, and also to verify the accuracy of the hypothesis that Zhuang Zi's concepts have influence on interpersonal behaviour, a correlation analysis was performed. The resulting diagram of relations among acceptance of Zhuang Zi's concepts, stress levels, and interpersonal behaviour is as follows:

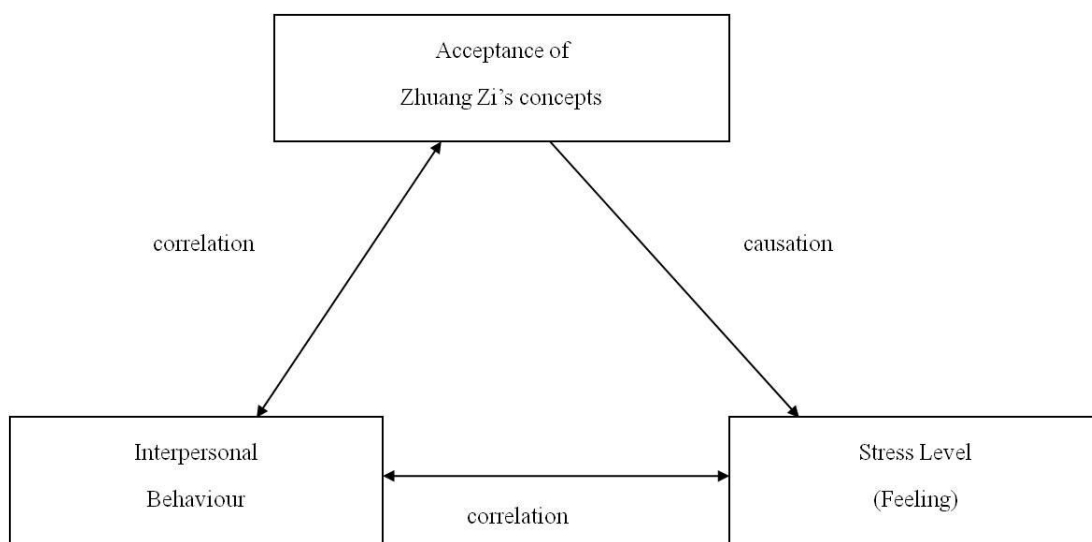


Figure 5-8: A diagram of relations among Zhuang Zi's concepts, stress levels, and interpersonal behaviour

5.10.1. The correlation between the post-test stress levels and interpersonal behaviour

The Interpersonal Behaviour Survey (IBS) was applied to the groups, and analysed to investigate any differences among the groups (see Appendix 5-20). As for the results,

there were no significant differences on the scales of Assertive Behaviour (Sig.=0.057) and Passive Behaviour (Sig.=0.933). Only the Aggressive Behaviour scale reached the level of significance (Sig.=0.000). The results of the Scheffe Post-Hoc Procedure were: Group 1 < Group 2 (Sig.=0.000); Gp 1 < Gp 3 (Sig.=0.000); Group 2 < Group 3 (Sig.=0.198). On the Aggressive Behaviour scale, the students of the bibliotherapy group were significantly less aggressive than those of the self-help group and the control group. However, there was no significant difference between the students of the self-help group and the control group.

The post-test stress level and the level of Aggressive Behaviour had positive correlations in all three groups, and significant positive correlations within both Group 1 and Group 3. This means the more stress one has, the more aggressively one behaves; the less stress one has, the less aggressively one behaves. Commonly, people behave with verbal or nonverbal aggression to give vent to their negative emotions and stress.

The stress level and the level of Assertive Behaviour were significantly negatively correlated in both Group 1 and Group 2, but the correlation was near the critical point in Group 3 (Sig.=0.053). This means that the more stress one has, the less self-assertively one behaves, and vice versa.

The stress level and the level of Passive Behaviour have significant positive correlations among all groups. The more stress one has, the more withdrawn one's behaviour. This affirms the results of IBS reporting in the IBS handbook. In sum, the

results show that as expected, stress levels are positively correlated to Aggressive Behaviour and Passive Behaviour, but negatively correlated to Assertive Behaviour. The details are shown in the following table:

Table 5-11: The correlation between post-test stress levels and interpersonal behaviour

Scale	Post-test Stress Level		
	Gp 1	Gp 2	Gp 3
Aggressive Behaviour	.288 (p=.001)	.142 (p=.153)	.213 (p=.030)
Assertive Behaviour	-.260 (p=.002)	-.316 (p=.001)	-.191 (p=.053)
Passive Behaviour	.255 (p=.003)	.254 (p=.010)	.440 (p=.000)

5.10.2. The correlation between post-test Zhuang Zi’s concepts and interpersonal behaviours

Ellis (1995) proposed that emotional and behavioural disturbances are caused by irrational thinking. He showed that cognition plays an important role in behavioural consequences. Following on this, Zhuang Zi’s concepts and interpersonal behaviours might have some relationships.

As for the results in Appendix 5-21, for Aggressive Behaviour, it was found to have significant negative correlations with Zhuang Zi’s concepts within Group 1. The greater acceptance of Zhuang Zi concepts students reported, the less aggressive they were. However, there were no such correlations for either Group 2 or Group 3.

In Group 1, the Aggressive Behaviour scale was significantly negatively correlated with all Zhuang Zi's concepts, in particular, Discarding Prejudice had the highest negative correlation with Aggressive Behaviour. Specifically, the more students accepted Discarding Prejudice concept, the less aggression they showed, and vice versa.

For Assertive Behaviour (see Appendix 5-22), there was a significant positive correlation with the Forgoing Demands concept in Group 2 (Sig.=0.011). The remaining factors showed no correlations. This shows that the level of agreement with the Forgoing Demands concept in self-help group is more correlated to Assertive Behaviour than with bibliotherapy. The remaining concepts seem to have less influence on Assertive Behaviour.

For Passive Behaviour (see Appendix 5-23), there was no significant correlation with Zhuang Zi's concepts in any of the groups. In other words, no matter what approach was implemented, Zhuang Zi's concepts, showed no correlation with Passive Behaviour.

5.11. Analysis of stress reduction in relation to demographic variables

After exploring the interaction of the different variables to discover potential relationships, we return to the independent variables to check if there are any differences in response to the experimental intervention, in relation to demographic variables such as gender, department, parental status, and residential status.

5.11.1. Variation by gender

In analysing the stress reduction in relation to demographic variables, the post-test mean stress level was subtracted from the pre-test mean stress level. Stress reduction is considered high where the resulting value is greater and positive; in contrast, a negative mean indicates an increase in stress. The following summarised table shows gender differences in stress reduction for Group 1:

Table 5-12: Stress reduction by gender for Group 1

Stress decrease	Gender	Mean	SD	t	Sig
School Work	Male	.35	1.359	-.897	.371
	Female	.58	1.546		
Personal Health	Male	.15	1.063	-.214	.831
	Female	.19	1.156		
Interpersonal Relationships	Male	.34	.986	-1.012	.314
	Female	.54	1.255		
Romantic Relationships	Male	.00	1.198	-2.348	.020
	Female	.49	1.212		
Family Communication	Male	.01	1.214	-2.102	.038
	Female	.51	1.453		
Career Planning	Male	1.16	1.597	-.411	.682
	Female	1.28	1.666		
Financial Problems	Male	1.51	1.616	-.893	.373
	Female	1.75	1.573		
Total (Sum of stress measures)	Male	3.53	4.891	-2.078	.040
	Female	5.35	5.235		

* Group 1: 79 males and 57 females

Within Group 1, it was consistently found that females' measures of stress reduction for the seven stress variables were all higher than those of males. Bibliotherapy seemed to be more effective in stress reduction for females compared to males. However, statistically significant differences between genders were found only in the following three measures: Romantic Relationships, Family Communication, and Sum of stress measures. Gender did not make an obvious difference in the remaining stress level variables. Possible reasons will be discussed in a later section.

In Group 2 with the self-help approach (see Appendix 5-24), males' stress levels were reduced more than those of females, in Romantic Relationships (Sig.=0.001). The same gender differences were found in Financial Problems (Sig.=0.010), and Total Stress level (Sig.=0.006). The stress reduction of males was much greater than that of females. We will discuss in a later section the possible reasons why males were more responsive than females to the self-help approach.

In Group 3, the control group, females ranked slightly higher than males in the reduction of most stress level variables (see Appendix 5-25). Males ranked higher than females only in the Interpersonal Relationships stress level (Sig.=0.665). However, there were no statistically significant differences between genders for any of the stress level variables.

5.11.2. Variation by department

Analysis of Variance of stress reduction among departments in Group 1 (see Appendix 5-26), there were significant differences of the stress reduction in School Work and Total Stress. After Scheffe Post-Hoc test, the stress reduction of students in the Information Management Department was greater than for those in Communication Engineering (Sig.=0.049) in the School Work stress level variable, although the difference was at the border line, i.e., the difference does not indicate a strong pattern. In Total stress level, again, the reduction of stress for Information Management students showed a slightly significant difference with Communication Engineering (Sig.=0.046), and also the stress reduction for Marketing and Distribution Management students was greater than for Communication Engineering (Sig.=0.024).

In Group 2, students of Health Care Administration, mostly women, unexpectedly showed increased stress levels in the Romantic Relationships variable. Students of Electronic Engineering showed significantly greater stress reduction than those of Health Care Administration (Sig.=0.018), as did students of Industrial Management (Sig.=0.002). For the sum of all stress levels, students of Industrial Management showed significantly greater stress reduction than those of Health Care Administration (Sig.=0.032).

In Group 3, the control group, there were no significant differences among departments in all stress level variables, which is as might be expected because no

intervention was applied to this group. However, the process of testing in itself could have led some students to anticipate a desired stress reduction, and females showed this effect slightly.

5.11.3. Variation by parental status

There was a few statistically significant difference (see Appendix 5-27), which were found in Group 2. In Interpersonal Relationships, students with a single parent experienced significantly greater stress reduction than students with both parents (Sig.=0.032). Besides, in Family Communication, students with “other” parental situations showed significantly greater stress reduction than students with both parents (Sig.=0.016).

Students with “Other” parental situations, which included students living with grandparents, or who were orphans, also experienced significantly higher reduction in stress level than those with a single parent (Sig.=0.021).

5.11.4. Variation by residence

There was only one significant difference, in Group 2, concerning residential status (see Appendix 5-28). Students who lived outside the family residence experienced more stress reduction than those living at home with the family (Sig.=0.018), notably concerning Financial Problems.

Discussion of results

5.12. The inevitable interference from the demographic variables

In the following discussion, I will clarify and extend the findings of the data analysis, drawing on my understanding of the students, the institution, and Taiwanese society at large. This discussion will consider various aspects of the effect of the demographic variables. In the following section, I will first explain the differences among groups and interaction with stress found in the pre-test.

5.12.1. The factor of gender representation

There was an asymmetric gender distribution in Group 3 because over 70% students were from engineering departments, e.g., Mechanical Engineering and Electrical Engineering. Likewise, the distribution of the total sample also showed significant asymmetry, due to the educational characteristics of the Institute of Technology.

In total, there are eleven departments in the institute; by chance, nine departments were selected for participation in this study. The remaining two departments not included in this study are Industrial and Commercial Design and Nursing. The gender structure of the Industrial and Commercial Design Department is around half male and half female. However, the Nursing Department is composed of all female students, but it is a special department in the institute due to its two-year educational system which is different from the other four-year departments. Since a hospital belonging to the

founder of the school is located next to the campus, the nursing department was established to provide convenient further education for nurses at the hospital. The criterion for entrance to the department is that students must have graduated from a three-year nursing vocational school; most students have already gained a nursing licence. If the Nursing Department is excluded, the characteristics of the samples and the population of the institute are similar. There were more males than females in this study, but this represents the situation in the institute. Choosing this Technical Scientific- oriented college in which to carry out the experiment created an inevitable skewed sample with a gender bias, but the basic experimental research design is still valid.

5.12.2. The factor of department of study

As the results have shown, the pre-test mean stress levels related to the Career Planning variable for the students of the Information Management Department were significantly higher than for those of the Mechanical Engineering Department. Mechanical Engineering is a traditional department which often has a typical vocational career blueprint, and students know more clearly which way to go after graduation. Also many of them have already obtained basic-level technician licences, e.g., Lathe worker licence, computer numerical control milling machine works licence, computer aided engineering drawing licence. Thus, they may feel secure about their occupational future. Moreover, many younger people do not like blue-collar jobs such as technicians in

manufacturing, so this field tends to be less competitive, though less well-paid.

On the other hand, from social observation, the Information Management Department, with its many new areas of technological advance, is becoming popular, but this field is more varied and competitive, and that is likely to bring greater stress. The Information Management Department is between the department of Information Engineering and general Management. The role of the Information Management Department is to train future managers of information departments. However, Industrial Engineering Department trains future hardware or software engineers. The General Management Department trains the professionals in the domains of “product management”, “financial management”, and “marketing management”. Information Management Department students may feel more stressed about their future management role caused by lack of familiarity with hardware/software engineering. They may also feel worried about competition, feeling they are not as expert as general management students.

Although there was a significant difference in Romantic Relationships stress among departments, no significant relationship was found in the Post-Hoc procedure. However, the highest pre-test mean stress levels in Romantic Relationships were found for engineering department students. This might be due to the educational characteristics of the department, as most of the students are males in a nearly all-male department, and so they have less opportunity to be acquainted with female friends in

their study or life circumstances. College students at this age are at the prime time for falling in love in Taiwanese society. Some junior high schools even divide classes by gender, supposedly in order to allow students to concentrate on study and avoid troubles from romantic affairs. Some students might feel worried about having little or no chance for dating. Also related to the gender segregation of the departments, they might be shy, passive, or feel stressed with females. In contrast, students of the Marketing and Distribution Management Department where there are more female students seemed to be less stressed, and the same was true of the Health Care Administration Department. These students could show off their advantages such as charm and popularity. In contrast, the stereotype of the future for Mechanical Engineering Department students is probably a blue-collar occupation which limits the opportunities for dating, for both males and females of this department. Unexpectedly, Communication Engineering Department students showed a lower level of stress related to Romantic Relationships. Perhaps some of them enjoyed attending extracurricular activities or having internet pals to create opportunities to communicate with female students.

5.12.3. The factor of parental status

It was found that students with single-parent families felt more stressed in relation to Financial Problems than those in both-parent families. Both parents can share the financial burden of the family, but a single parent would be strained if there is no alimony payment following a divorce, or if one parent is deceased, in which case adult

sons/daughters might take responsibility for the family livelihood. Moreover, confronting economic depression and fearing being unemployed, single-parent families may be under more stress than both-parents families. Therefore, this finding is not surprising.

5.12.4. The factor of residential status

There was no big difference among groups in terms of residential status. However, there was quite a substantial differential between the two types of residential status, i.e., over 90% of students lived with family, and less than 10% of students had outside residence. Due to the convenient location of the college, quite near to one of the main underground stations (Eastern Hospital Station of the Taipei Metro Rapid Transit), most students were commuters. 91.5% of the total sample lived at home with family, and 8.5% lived by themselves or shared with other students, on or off campus

The institute in question is more or less a vocational college, i.e., not the highest level of education, and students tend to be self-recruited from the nearby urban area. In order to attend the highest level or most prestigious universities, students would go to the expense and trouble of living away from their families, but would be less inclined to do so, when studying locally. Moreover, since transportation is convenient from the major metropolitan region of Taipei City and Taipei County (with a combined population of over six million) to the school, students in this catchment area can easily live at home.

In sum, the sampling issue is an essential and dynamic factor within the research design. Any skewed sampling might create biases. In this study, a bias from gender imbalance in Group 3 exists. However, in quasi-experimental research, it is hard to avoid this type of problem completely, and this research design still be valid.

5.13. Changes of cognition through bibliotherapy

In this study, we introduced Zhuang Zi's philosophy to students as an optimal schema in stress reduction. First, we need to know whether the students accept Zhuang Zi's concepts or not. Thus, the most direct method is to examine the levels of students' acceptance of Zhuang Zi's concepts.

5.13.1. Differences in agreement with Zhuang Zi's concepts before experiment

In the pre-test results, the level of agreement with Zhuang Zi's Forgoing Demands concept exhibited considerable differentiation among the three groups, which reached a significant level. In the Scheffe Post-Hoc procedure, there was a non-significant difference between Group 1 and Group 2; however, the level of agreement of Group 1 was significantly higher than that of Group 3; likewise Group 2 showed significantly higher agreement than Group 3. The agreement level mean of Group 3 was much lower than those of the other two groups. The low agreement level of Group 3 in the Forgoing Demands concept may be due to the gender imbalance, which creates a sample bias. There was an asymmetrical sample of genders in Group 3, in which 90.4% of students were males and 9.6% were females, whereas the other two groups were composed of

about 60% males and 40% females. Males seemed to agree less with Forgoing Demands, compared to females. In Asian society, many males tend to more dominant and intractable, and they are more keen on face-saving than females. Such a sample bias problem would reduce representativeness; however, it is hard to completely avoid such bias in a quasi-experimental design. In relation to the concept of Discarding Prejudice, Removing Greed, and total scale of the three concepts, there were all non-significant differences among groups in the pre-test, which conforms to the objective of this research design.

5.13.2. The differences of agreement levels with Zhuang Zi's concepts in the post-tests

The post-test results showed statistically significant differences among groups in the level of agreement with Zhuang Zi's three concepts which indicate the research design is valid and affirm the effects of bibliotherapy. Further, the Post Hoc results regarding agreement levels for each concept show the same pattern: Group 1 > Group 2, Group 1 > Group 3, Group 2 > Group 3. The only exception was a non-significant difference (Sig.=0.080) between Group 2 and Group 3 in the Removing Greed concept, because the students in Group 2 showed only a small increase in level of agreement in the post-test, close to that of Group 3. This suggests that self-help was less effective in inducing acceptance of the Removing Greed concept. Greed is innate in everybody, so it is necessary to educate people about how to control greed, such as through moral appeal.

However, society is filled with various temptations that constantly stimulate our desires. Reading alone may have too weak an impact to persuade oneself to give up something, especially the pursuit of fame and fortune. Discussion with others may be more powerful in clarifying and emphasising the meanings of readings.

5.13.3. The impacts of Zhuang Zi's concepts through bibliotherapy

In Group 1, there were significant differences between the pre-test and post-test in agreement with all three concepts. Importantly, this means the acceptance of Zhuang Zi's concepts was clearly different among groups. People would unconsciously re-organise and root their thoughts/values through the process of reading, or gain insights from certain contributive readings, such as Zhuang Zi's fables, which offer stimulus for discussions on the topics of modern life stress. These results exhibit that students' cognition was effectively influenced by Zhuang Zi's concepts and provide strong evidence for the impacts of bibliotherapy.

In Group 2, the level of agreement with all three concepts was found to increase in the post-test, which means that the self-help approach can have some effect. Although acceptance of the concepts of Discarding Prejudice and Forgoing Demands was significantly different between the pre-test and post-test, there was no significant difference in the concept of Removing Greed. The Self-help approach seems not to be as powerful as the bibliotherapy approach in inducing acceptance of the concept of Removing Greed. Reading by oneself, without discussion and peer support, may be

insufficient to help people to reject external temptations, especially in a society filled with lots commercial advertisements to constantly create peoples' desires.

In Group 3, there were non-significant differences between the pre-test and post-test in all concepts. Even though the level of agreement with the Discarding Prejudice and Forgoing Demands concepts increased in the post-test, the increases were only slight and did not reveal any substantial difference, so this control group, as predicted, provided a good basis for comparison in assessing the effects on the treatment groups.

5.14. Evaluation of stress reduction through bibliotherapy with Zhuang Zi's fables

Generally speaking, most freshmen feel less stressed compared to students in other years of college because they have just graduated from high school and experience a departure from their previous highly regulated life and whole-day regular schedule, and get into a new varied life. However, they still have some stressors that need to be considered, as described in the following sections.

5.14.1. The reasons causing the different stress levels in the pre-test

The results for pre-test stress levels "among groups" are similar to those "among departments", because the way of the departments were formed into groups. In the pre-test results, only a slightly significant difference was found, whereby stress levels in Group 1 were higher than those of Group 3 in Career Planning. What factors make this difference? It might be due to the departments making up Group 1, i.e., IT,

communication technology and management, which are somewhat stressful and competitive. Many universities in Taiwan try to promote study in these fields and recruit more students are due to the popularity of technology related to computers and mobile phones. However, such students seem to be conscious of competition, either in later course requirements or future employment. An additional source of more stress may be the challenge of rapidly changing knowledge, although they may have chances to create a new technological invention to become future stars or attain wealth. On the other hand, the types of department in Group 3 belong to more traditional industries which may not change as quickly as those of Group 1. Also many of the students have obtained basic-level technician licences at vocational high schools. Perhaps they could be more confident and secure about the future, and significantly less stressed about the Career Planning variable compared to those of Group 1.

The features of the data for Group 3 are interesting, in that it has the lowest stress level mean in the Career Planning and Financial Problems variables among groups, but the highest stress level means for the remaining five stress level variables. Group 3 is composed of the following departments: Mechanical Engineering, Electrical Engineering, and Materials and Textiles. These departments represent basic industries that are assumed not to change quickly and to be less competitive, compared to Information Technology fields. Most students in these fields would be clearly aware where to go after graduation, and feel more secure about a stable future and income,

even if not well-paid. This might explain why Group 3 students had the lowest stress levels in relation to Career Planning and Financial Problems.

However, these engineering departments include a large amount of practical training, so students need to spend much time in the school manufactory or lab in order to achieve acceptable outcomes. This is likely to increase the stress from School Work. Moreover, the amount of time spent with machines or apparatus could mean these students have less chances to practise their social skills and interact with others in their professional area and private life, or even neglect to take good care of themselves, due to receiving less education on this topic. These circumstances would impede coping with the stress from Personal Health, Interpersonal Relationships, Romantic Relationships, and even Family Communication.

5.14.2. The factors making different stress levels in the post-test

The results of all seven stress level variables showed that Group 1 had the lowest stress level mean; Group 3 had the highest stress level mean; and the stress level mean of Group 2 was between Group 1 and Group 3. This finding confirms the hypothesis that Group 1 treatment exposure was the most effective in stress reduction in all groups. In addition to reading, the dynamic of discussion in Group 1 strongly empowered students to reduce their stress, compared to Group 2 with reading only.

According to the results on post-test stress level variables among groups, the greatest significant differences among the three groups were for Financial Problems and

Career Planning. Group 1 showed significantly less stress than Group 2 and Group 3. Bibliotherapy with discussion can provide opportunity to share different views and experiences in groups, which can help clarify personal doubts. However, in the self-help approach only general teaching materials were provided for self-learning, but there was a lack of feedback which would help students to inspire each other and reflect.

Many college students are financially independent and have part-time jobs after class or during vacations. When they run into the financial difficulty, they might hope to find opportunities to increase their earnings, rather than seeking help from their parents or friends. Sharing vivid personal experiences with others might provide insights into how to calm their minds and overcome the insufficiency. Expressing out one's feelings and thoughts is the part of the therapeutic process. Exchanging personal experiences with peers also helps induce the motivation for individual growth. Books alone have limited persuasive power; interaction and discussion with group members helps reach the optimal effects. Thus, the results confirm that the effect of bibliotherapy with discussion is significantly higher than that of the self-help approach in dealing with such issues.

In the post-test of the School Work stress variable, there were significant differences between Group 1 and Group 3, and likewise between Group 2 and Group 3. Only Group 3 experienced slightly increased stress. However, there were non-significant differences between Group 1 and Group 2. School grade/achievement is

the symbol of self-value during school days. Pursuing self-value/self-esteem is one of peoples' basic needs, i.e., deficiency needs, in Maslow's Need Hierarchy Theory (Maslow, 1970). Being overly worried about performance in School Work or conformity to expectations would bring forth considerable stress, so it reduced only a little bit of stress in Group 1. The issue is how to effectively but unobtrusively influence students through Zhuang Zi's stories. These stories carry the concept that a person's value is based on his/her existence, not on worldly achievement or others' opinions. Although it is hard to set aside one's stereotypical thinking about oneself, we still need work more on this theme.

In regard to Romantic Relationships stress, also, there was a non-significant difference between Group 1 and Group 2, which disconfirms the hypothesis that Group 1 with full treatment exposure would show a greater effect compared to Group 2 with reduced treatment exposure. However, this does not mean that bibliotherapy is ineffective; it just means that Groups 1 and 2 have very similar mean stress levels. Nevertheless, the levels of stress for both Group 1 and Group 2 are still significantly less than those of Group 3. These results confirm the prediction that Group 3 would have the highest mean level of stress among groups.

With regard to non-significant post-test results in the area of the Personal Health, a moderate stress level was maintained in the three groups. Most college students are young and still in good health, which may lead them to be less concerned about their

Personal Health issues. Nevertheless, some students might have health problems and it is difficult to recover from illness, injury, or to give up unhealthy hobbies within a short period of treatment. As for Interpersonal Relationships, stress among all three groups was greatly reduced; even Group 3 showed a significant reduction and it is hard to identify the causes without any treatment having been administered.

In Family Communication, the non-significant stress variable, the stress level means of Group 1 and Group 3 were slightly reduced, but that of Group 2 increased very slightly. Although the Discarding Prejudice concept could help to promote harmonious communication within family, there is a deep-rooted tradition of filial piety and duty in Chinese family ethics that would cause stress from the concern to be obedient, and to provide and care for one's parents. Zhuang Zi's fables did not mention these issues and his concepts have less influence on family affairs.

In sum, four out of seven stress variables were statistically significant, but the remaining three stress variables were non-significant. This result shows that bibliotherapy seems not to be effective for all variables, which may limit the effect of bibliotherapy. However, this is an exploratory research that tries to find any causality or correlations that exist; the most important thing is its contribution to evidence that bibliotherapy can help in reducing stress in the four dimensions of variables including School Work, Romantic Relationships, Career Planning, and Financial Problems.

5.14.3. The differences between pre-test and post-test

Regarding the differences between pre-test and post-test for Group 1 with full treatment exposure to bibliotherapy, there were no significant differences in the stress variables of Personal Health, Romantic Relationships and Family Communication; we might conclude that Zhuang Zi's concepts are not effective in dealing with the above problems. Zhuang Zi's philosophy tends to be more individualist, emphasizing the freedom of the mind, and has less focus on intimacy. Zhuang Zi discussed general interpersonal relationships, and even relationships between the ruler and his citizens, but he dealt little with the issues of romance and family affairs. Thus, these issues are relatively ignored in Zhuang Zi's philosophy. However, Zhuang Zi often spoke on the importance and ways of preserving health of mind and body. Ironically, the students in the bibliotherapy group did not seem to experience much change on the Personal Health variable. Possible reasons could be that most students are young without health troubles, or they might have some chronic health problems that cannot be healed in a few months, e.g., some students might have stayed out to drink all night for many years and get liver trouble, or they might have some bad habits that impede their health which are hard to give up immediately, e.g., addict on drinking.

Regarding significant stress reduction in Group 1, possible reasons are as follows:

First, the most stress reduction through Zhuang Zi's concepts was found in the variable of Financial Problems. He advocated enjoyment of a simple life, i.e., happy is

he who is content. His Removing Greed concept may help people to reduce their excessive material desires, even in a society with adequate resources; many people have financial stress or loans due to the fact that they “want” too much or are attracted by some commercial products, not what they really “need”.

The second most stress-reduced variable was Career Planning. The students of Group 1 were not as worried about their career as before and felt more relaxed after bibliotherapy, as if they had internalized Zhuang Zi’s concepts, i.e., to do what you should do, and be your true self. That is, one does not need to attempt high achievement to attract others’ admiration, increase self-value or win public glory. The meaning of the Forgoing Demands concept is not to be insistent on controlling everything, but let things follow their nature. Do not purposely pursue fame and fortune, because such vanity is temporary; it cannot console one’s soul or bring forth real happiness.

Next significant in reduction of stress was the Interpersonal Relationships variable. The Discarding Prejudice concept means accepting multiple values and not being stubborn in insisting on certain absolute standards. This would help to get rid of some complaints, help people to break on impasse with others, and create a harmonious atmosphere. Especially in the modern crowded city, people are competitive, and wear masks. Though they seem to be close to each other on the surface, even living on different floors of the same building, the distances of mind are great.

The last significant difference was in the School Work variable. The students

seemed to find it easier to confront the stress from school after bibliotherapy. School Work pressure did not bother them as much as before bibliotherapy, even though their School Work load may have increase near the end of term. They would try to do their best, but not be unduly anxious about the outcomes.

In sum, it was found in this study that bibliotherapy with Zhuang Zi's fables can facilitate stress reduction. Moreover, it seems to have been effective on the stress related to the issues of quickly pursuing a so-called successful career, i.e., Financial Problems, Career Planning, Interpersonal Relationships, and School Work, but ineffective in the dimensions of Romantic Relationships, Family Communication and Personal Health. Although bibliotherapy affected some stress level variables, which would not limit the scope and power of bibliotherapy, this exploratory research still has a contribution on finding out in what area and how Zhuang Zi's concepts impact on students.

As for Group 2 with partial treatment exposure to bibliotherapy, the change in Career Planning and Financial Problems were the only two significant differences in stress level means between pre-test and post-test. From the previous results, the significant changes for Group 2 in agreement with the concept of Discarding Prejudice and Forgoing Demands might help the students feel more carefree, accept adversity without complaint, or be calm and console themselves when they are frustrated or worried about the uncertain future or financial inadequacy. However, they seemed not to agree very much with the concept of Removing Greed, which was expressed in the

items of PBSCI:

Item 24: It is important to make oneself feel content.

Item 16: Spiritual self-cultivation is more important than worldly gain.

Not accepting the above concepts may constantly produce stress and lead to pursuit of the material satisfaction or endlessly seeking high achievement. Thus, stresses might occur when individuals' desires accumulate to a certain level.

The stress reduction in Personal Health was moderate in Group 2, not the least stress reduction in the ranking as in Group 1. This might be because Group 2 included the department of Health Care Administration, in which students would be more aware of how to manage one's health than students of other departments. Besides, the School Work stress variable was reduced only a little; it is hard to assert the possible factors. The students may have had an over-load of homework and felt frustrated.

Finally, an interesting finding is that the post-test stress in Family Communication was a little higher than those of the pre-test for Group 2. However, Family Communication stress for Group 3 was very slightly reduced. Group 3 was a skewed sample of gender in which over 90% of students were males, and less than 10% were females. It is possible that the repetition of questions from a traditional-sounding philosophy triggered some paternalistic sentiments for male students. Up to now, some Chinese families still have very traditional values and typical paternalistic interaction in the family, valuing males more than females. Thus, men play a dominant role in many

families, and women are expected to be obedient to their parents.

As the above discussions indicate the efficacy of stress reduction in the self-help approach is less than that of bibliotherapy, but the self-help approach is more effective than no intervention (the control group). Although out of seven stress variables only two were statistically significant, the results of Group 2 are still encouraging because they indicate that this partial bibliotherapy approach can to some degree help influence students on coping with stress.

In Group 3, surprisingly, there was a significant reduction in the Interpersonal Relationships stress variable between pre-test and post-test, which obviously runs counter to the expectation of the research. We are not sure what caused this stress reduction in this control group, and what happened between pre-test and post-test. We do not know whether any students in Group 3 had experienced important life events that helped to improve their relationships with others, or had satisfying friendships; or perhaps some of those in Group 3 benefited from natural maturity or gained insight from life that affected their outlook. Thus, it is difficult to completely eliminate individual differences that impair the internal validity and legitimacy of research design, but Group 3 did not experience any significant reduction in the six other stress measures. Thus, the control conditions can be accepted and do not negate the final conclusions of this study.

Besides, the stress level means of Family Communication variable was also

reduced but just a little as was discussed in the previous sub-section. The stress level means for the other five stressors were higher in the post-test than the pre-test, which might not be surprising as the school semester progressed and assignments accumulated. That is the common situation of most students.

5.15. Discussion of stress reduction

Based on the difference between pre-test and post-test yields a measures, the increased levels of agreement with Zhuang Zi's concepts were analysed in relation to the reduction of stress levels. The post-test outcomes had to be compared with the pre-test in order to identify the effects of the experiment and the validity of the hypothesis.

5.15.1. The effects of bibliotherapy adopting Zhuang Zi's fables

According to the results on the increase in overall agreement with Zhuang Zi's concepts, Group 1 showed a significantly greater increase than Group 2 and Group 3; while Group 2 is reported significantly higher agreement than Group 3. This indicates that bibliotherapy worked effectively for Group 1. For the Discarding Prejudice and Removing Greed concepts, the significance of difference between Group 2 and Group 3 was close to the border line of insignificance, but that does not threaten this study too much.

Undoubtedly, bibliotherapy with discussion was more effective than self-help. Through reading and group discussion, individuals will be effectively stimulated to

think and reflect by group feedback. This sharing is good practice for opening one's mind to respect others' views. Also it improves cognition and prompts rechecking of one's values. In general, discussion groups will spontaneously bring forth "controllers", "inquirers", and "auditors" to interact and brainstorm, a process that may push group members' thinking to be deeper and broader, providing more insight than the self-help approach could provide in learning alone.

5.15.2. Comparison of stress reduction among groups

The stress reduction of Group 1 was significantly greater than that of Group 3 in the School Work stress level variable. However, there was no significant difference between Group 1 and Group 2, which means there is no significant difference in School Work stress reduction between bibliotherapy and the self-help approach through employing Zhuang Zi's concepts. School Work stress can be induced by inner drive or expectation for perfection, but most School Work stress comes from external demands, e.g., homework loadings from different teachers, no choice on required courses, and time pressure when homework deadlines approach. The availability or absence of discussion seemed to make no significant difference in this area. Students might have felt more frustrated because the objective situation was still present, as undoubtedly, the only way to pass every course is to complete all requirements as quickly as one can.

In the Career Planning and Financial Problems variables, there were strongly significant differences among the groups. This means that Zhuang Zi's concepts had

more effect on Career Planning and Financial Problems stress levels than on other stress level variables. Obviously, bibliotherapy with discussion was significantly more effective than self-help without discussion. Career Planning and Financial Problems stress are related to the future, and filled with uncertainty. For the students, it seemed to be useful and practical to get information and exchange experience about various social trends.

5.15.3. Cognitive shift plays a crucial role in stress coping mechanisms

In Figure 1-2, which is a flow chart of the stress coping process, we can see that the most crucial phase in this process is the mustering of one's self-efficacy. One cannot cope with stress if one's efficacy is impaired. In contrast, one can cope if one has well-functioning self-efficacy, involving cognitive thinking, a value system, social resources, a support system, and coping skills. However, the cognition and values factor were considered the main effect in this study. Without effective cognitive shift and positive thinking under a stressful situation, the person may fall into a stress cycle, repeatedly experiencing stress again and again in anticipation and in reinforced memory. Thus, a coping mechanism like effective cognitive thinking is essential, and it can seem to magically change the interaction during the process of problem solving and stress coping. Bibliotherapy can provide a subtle way to shift cognition and values, circumventing the defensive reaction to direct "preaching".

Zhuang Zi's fables as reading material hint at certain principles to challenge and

reshape one's way of thinking, i.e., creating resistance to commercial temptation, and overcoming preconceived bias towards so-called criteria of success. As the result, the experimental groups with bibliotherapy intervention significantly reduced their sense of stress in some domains: Financial Problems, Career Planning, School Work, Interpersonal Relationships, etc. However, the control group, without any intervention, did not change much in their stress level, as found at the post-test.

5.16. The main concepts of Zhuang Zi correlated with stress levels found in the post-test

In Group 1, there were significant negative correlations between all three Zhuang Zi's main concepts and stress levels found in the post-test. The greater the acceptance of Zhuang Zi's main concepts through bibliotherapy, the lower the level of stress reported in the post-test, and vice versa.

Daoist Philosophers think it is optimal that people and things are in a state of frugality and modesty. Happiness is not based on material wealth and reputation, but on the balance of body and mind. With such a balance, people will not be impeded by the stirrings of materialistic society, and their minds could be at peace even living within the noisy city (He, 2005). It is better to discard the stereotypical general values of successful life, not to insist on chasing higher social class status or wealth, which makes life stressful for most people in this modern society. We should try to change our attitude to life and release the stress. Happiness and enjoying being one's unique true

self is the greatest value in life.

In Group 2 as well, all of Zhuang Zi's main concepts were negatively correlated with stress levels in the post-test. Only the Forgoing Demands concept was slightly significantly correlated with post-test stress levels. Forgoing Demands is a sort of life attitude that one seems to be self-cultivated and be feasible to achieve by the self-help approach. For Group 3, there was no any correlation between Zhuang Zi's main concepts and stress levels in the post-test, which shows that the experiment control worked well.

5.16.1. Which of Zhuang Zi's concepts bring the effects of stress reduction

In Group 1, the reduction in Career Planning stress level variable was all significantly correlated with increase in acceptance of all three of Zhuang Zi's main concepts. Pursuing enjoyment is innate in human, but it would cause misfortune if people pursue it immoderately. It is best to live a simple life, removing greed, and not chasing rare treasure, because it would make people impudent (Lao Zi, ch.19; ch.64). Therefore, by learning to follow by one's real needs without greed, one's future career would be the best fit and less stressful for oneself.

Qu, Li and Su (2007) have argued that peoples' psychological stress would increase as the level of happiness and satisfaction decrease, especially in a rapidly developing society. This conclusion includes dissatisfaction with life, marriage, and occupation. The more social status people achieve, the more desires they pursue; and

finally, the more stress they are loaded with. Many people pursue a successful career and they set goals for reaching perfection, requesting a lot of material achievement and high standards of living. Many people place importance on material life and are anxious about financial conditions. Achieving contentment becomes the crucial prescription for release of psychological disturbance. Aside from Zhuang Zi's Removing Greed concept, Lao Zi also advocated that the greatest disaster is dissatisfaction; the most severe crime is greed. Only psychological contentment is eternal contentment (ch.46). One will not incur insults if one's mind is content. One will be safe if one's behaviour is proper and balanced. Thus, one can live happily for a long time (ch.44). Daoist Philosophy advocates Removing Greed and creating balanced relationships with others, the environment, career settings, or even with Nature. These philosophical ideals are perhaps even more salient in the modern world where consumption is stimulated by advertising, and competition is enforced in the job market. A conscious effort is required to counter the psychological impact of these phenomena. Therefore, the stress from Career Planning and Financial Problems was reduced effectively.

In detail, the sub-concepts of Zhuang Zi that were correlated to stress reduction in Career Planning were: Quit stubbornness, Manage Emotions, Free the Spirit, and Accept life's Fate. Zhuang Zi criticised the absurd and alienating situation whereby people esteem having a successful career as their only life value, so they devote their life to accomplishing this task, and unconsciously make themselves into instrumentalists.

Finally they lose themselves in constantly chasing fame and fortune. Zhuang Zi also thought people need to really understand the nature/law of things, then they can be fully developed, and free from the external environment, i.e., they can get rid of various torments. To “Free the Spirit” means to possess a merciful heart and be open-minded to allow everything to develop in its own way/speed; also to respect the value and independence of the individual, to avoid rigid constraints, and live a natural life (He, 2005). If college students can really understand the meanings of Zhuang Zi’s Free the Spirit concept, they can effectively overcome their psychological confusion, adjust their negative feelings, rationally control their emotions, transfer and sublimate their negative attitude. Undoubtedly, Zhuang Zi’s critique, and valuing the real existence of people is a good prescription for adjusting one’s state of mind, and also for the detoxication of civilization (Jiang, 2007). Zhuang Zi’s perspective of absolute freedom provides people with a way to release stress, and balance their minds.

American pop culture and Hollywood films often inculcate into people the powerful image “Fight! Fight! You must be the best”. Especially, capitalist society got more competitive, however, this neglects multiple life values, and individual irresistible circumstances. Reinhold Niebuhr’s famous saying (1892-1971) was, “God, grant me the serenity to accept the things I cannot change, the courage to change the things I can, and the wisdom to know the difference.” Accept life’s fate sub-concept also hinted that if the things cannot be changed then they should be accepted it serenely.

The other significant correlation was between stress reduction in Financial Problems and the increase in Removing Greed concept. Zhuang Zi indicated that we should let things serve their proper purpose and be utilized well, but we should not be enslaved by materials. There are two different life states. One is to make the best use of things which is the natural and harmonious state between humans and materials; the other is that people are restricted by materials, which is the opposite relationship between human and materials, i.e., people become materialistic and alienated through chasing material enjoyment. The former is the basis of spiritual freedom; however, the latter is the root of psychological vanity and imbalance (He, 2005).

Looking more deeply at sub-concepts, the decrease in Personal Health stress level is slightly correlated with the increase in agreement with the Quit stubbornness sub-concept. Health is not only bodily well-being; the most important aspect is mental hygiene. Releasing stress from the mind can really stimulate the life energy. The Quit stubbornness sub-concept could make one's life more flexible and creative, making life smoother and more healthy. Physical and mental health are equally crucial in life.

5.17. The most influential concepts to reduce stress

Among Zhuang Zi's concepts, the most influential factors for stress reduction are Quit Stubbornness and Be Optimistic in Adversity (converse thinking) concepts, according to the regression analysis. It is necessary to give up the fixed ineffective ideas and try a new way, because one should not expect to have different outcomes if one still

behaves in the same way. It could be a struggle in vain if one still sticks to what one wants, which is not available. To recognize our foolishness is not the most foolishness; to recognize our confusion is not the worst confusion; the greatest foolishness is not to recognize reality throughout one's lifetime; the greatest confusion is not to understand oneself for one's whole lifetime (Zhuang Zi, Ch. 12, para. 14). William Shakespeare (1564-1616) also said "The fool doth (does) think he is wise, but the wise man knows himself to be a fool." Another parallel is found in the words of the famous Chinese Tang Dynasty (7th-10th) poet, Yuan Zhen, who said that he would never say "such a beautiful cloud" when he saw the most beautiful cloud; he would not fall in love even when he saw such beauty. From this poet reveals that he did through excessive stubbornness, he risks missing any beautiful scenery or lover in this world. Without eschewing old ideas, there would be no space for new ones. Thus, ceasing stubbornness and keeping an open mind that would be a wise choice to allow opportunities for a new life.

The second most influential concept is Be Optimistic in Adversity (converse thinking). Changing one's attitude towards stress and creating alternative thinking might bring a the turning point, and head off adversity. This is not a view from Pollyanna; there is evidence in real event during the authoritarian Chinese Qing Dynasty (17th-20th), Minister Zeng Guo-Fan's brother Zeng Guo-Quan was his subordinate officer. Every time he fought, Zeng Guo-Quan was defeated. Minister Zeng Guo-Fan

had to report his brother's results in battle to the imperial palace, but he knew the Emperor would be annoyed by such a military report and would have his brother killed. However, Minister Zeng Guo-Fan was so smart that he converted the report to say that even in the face of defeat, his brother kept fighting. Therefore, the emperor rewarded his brother for his valor. The revised narration reported the same thing, but resulted in the opposite outcome. Converse thinking is the optimum strategy in coping with stress.

The book by Scott Thorpe, "*How to think like Einstein: Simple ways to break the rules and discover your hidden genius*" (Thorpe, 2000) reveals that Albert Einstein suggested that people give up their established practices because they would restrict their ways of thinking; then they could figure out new strategies. The way of solving some problems is not the same as we imagine.

Moreover, as another example of converse thinking in adversity, narrative therapy tries to deconstruct the value of life weaknesses, encouraging people to find out and appreciate their strength in adversity. Even though we may be unable to change the adverse situation, people still possess certain precious strengths to endure suffering or failure (White & Epston, 1990). Similarly, a counsellor needs to identify the target beliefs or strengths in helping students cope with problems in life.

5.18. Exploration of relationships between Zhuang Zi's concepts and interpersonal behaviour

After administration of the experiments, the results reveal no significant difference in either Assertive Behaviour or Passive Behaviour among the groups, but a significant difference was found in Aggressive Behaviour. This implies that bibliotherapy has an influence on Aggressive Behaviour. The Scheffe Post-Hoc procedure, revealed significant differences in aggressiveness as follows: Group 1 < Group 2; Group 1 < Group 3. However, there was no significant difference between Group 2 and Group 3.

For the Aggressive Behaviour variable, there was significantly negatively correlated with all Zhuang Zi's concepts in Group 1, particularly, Discarding Prejudice had the highest negative correlation with Aggressive Behaviour. The more students accepted Discarding Prejudice concepts, the less aggression they showed. This is the most influential concept in reducing aggression.

For the Assertive Behaviour variable, surprisingly there was a single significant positive correlation with the Forgoing Demands concept in Group 2. The Forgoing Demands concept seems to have an influence on Assertiveness in the self-help approach, but not through bibliotherapy. Although the students in Group 2 did not share and discuss feelings and ideas with others, they may have gained special personal experiences or insights through reading, and made some changes. Assertive Behaviour implies pursuing goals with a positive attitude and competing with others under fair

rules. However, the Forgoing Demands concept recommends “living a natural life”, which means to do the right thing at the right time and in the right place, but without insistence or demanding. It does not mean laziness. Instead, on the surface, the person may seem to be doing nothing, but things have been done, just as we see the swan swimming gracefully on the lake, but we do not see its webbed feet paddling forwards under the water. Similarly, people need to achieve life tasks with natural effort, and pursue spiritual enjoyment instead of insisting on something inappropriate or not belonging to oneself. The question may be raised, if the Forgoing Demands concept shows an influence on Group 2, why does it not have any effect on Group 1? The reason may be that different people have different speed of growth. Personal psychological growth and behavioural modification is a long-term process. Three months of bibliotherapy perhaps is the transition, so the reactions of participants in Group 1 may have been on the way to changing, and perhaps there would be some impact in the future.

Passive Behaviour shows no correlation with Zhuang Zi’s concepts, although in general people may expect that there would be some correlation between Zhuang Zi’s concepts and Passive Behaviour. From the stereotypical view, Zhuang Zi’s concepts may seem to be passive, repressive, and forbidding, such as discarding, removing or forgoing one’s insistence, and they include the concepts of not fighting for something and not confronting the tough with toughness. This seems to be controversial and

contrary to this result. Actually, Zhuang Zi is not afraid of dealing with adversity. Instead, the attitude when confronting adversity is magnanimous and detached; that is, to see through a thing and be resigned to what is inevitable and let go. One does not worry about fame and fortune, but emphasizes self-cultivation and self-possession so that one is Immune from case and the mind is totally set free.

5.19. Influences of demographic variables on stress reduction

We can comprehend the reasons for the variation seen in Group 1, and the pattern in Group 3. However, it is more complicated to explain Group 2, because some students may gain new insights after reading, while some may misunderstand what they read, or interpret it in the light of their own views without sharing and discussion.

5.19.1. Gender factors in stress reduction

According to the results of bibliotherapy group, females' stress reduction was higher than those of males for all stress level variables. Females seem to be more easily influenced than males through bibliotherapy, especially in relation to Romantic Relationships and Family Communication. Both variables reflect sorts of intimacy that are significantly different between genders. Females are sensitive to family relationships and have stronger drive to patiently maintain close relationships, and are open to psychological growth. Females may be more easily persuaded than males if Zhuang Zi's concepts are explained in a practical way, and achieve consensus by most members.

By contrast, males exhibited greater stress reduction than females in the self-help

group. Males were more responsive than females to stress reduction through the self-help approach, especially concerning Romantic Relationships and Financial Problems. Males tend to be independent thinkers, less easily influenced by the outward environment, self solving problems, less rely on consultation or sharing with others. Reading may be a way to provide them with a reference point to think through an issue. Perhaps, also, males find it more difficult to talk about their feelings, and to show weakness, fear or vulnerability to others. From the results of this study, we can propose that reading with group discussion is the optimal way of stress reduction for females, whereas the self-help approach is effective for males.

5.19.2. Department factors in stress reduction

As the results showed in Group 1, the students from the Management department seemed to be more responsive than those of Engineering. Bibliotherapy may be more influential on Management department students because most students in this field of study are trained to have concern for social issues and may be more interested in reading and discussing literature, compared to those in Engineering.

Unexpectedly, the students of Health Care Administration, who were mainly female, reported increased stress levels in School Work, Romantic Relationships, and Family Communication. Many of this department's students were not from a medical related study field, i.e., had not graduated from nursing school, but one of their required courses in the first semester was anatomy, which would be quite difficult for these

students and may have caused them to feel frustrated in School Work.

Furthermore, this results showed that Health Care Administration students' stress levels exceeding those of students in the Electronic Engineering and Industrial Management departments concerning Romantic Relationships. It is unknown what had happened to the students of Health Care Administration, to increase stress levels in those students. Some of them may have been suffering tangled romantic affairs or other personal events to cause this difference.

5.19.3. Parental status factors in stress reduction

In Group 2, the students with a single parent achieved significantly more stress reduction than the students with both parents in the Interpersonal Relationships variable. Also, the students with "other parental status" reduced stress even more than those with both parents and a single parent in Family Communication variables. Generally speaking, students with a single parent or orphaned may have more likelihood of interpersonal problems even with friends or the families. For example, they may have difficult interactions with the single parent or be discriminated against or bullied by others due to their unusual family situations. There are some of Zhuang Zi concepts that can help unobtrusively and imperceptibly to reconcile interpersonal problems. These include Discarding Prejudice, Be true to one's self, doing things is not for meeting others' expectations, being calm under a threatening environment, etc.

5.19.4. Residential status factors in stress reduction

In both Group 1 and Group 3, there were no significant differences in stress reduction between residential statuses. Only a significance in Group 2 (the self-help group), the stress reduction of students who lived outside the family residence was greater than that of those living at home with family, concerning Financial Problems. These living outside the family residence may have the expenses of rental, meals, living goods, and extra irregular social activities. Zhuang Zi upholds enjoying a natural simple life. This ideal of a natural life style may influence people to lower their material expectations and be at ease with difficult circumstances or outside the family residence, which can facilitate decreasing the stress level of Financial Problems.

5.20. Summary

This chapter has provided an account of the analytical procedures employed to evaluate the impact of the bibliotherapy intervention, and their outcomes. First of all, various demographic variables were analysed in order to ensure the symmetrical distribution of these within each group. Inevitably, due to the quasi-experimental design, this study involved skewed sample groups, and was not totally exempt from such bias. To assess the equivalence across groups prior to intervention, I checked that no significant pre-intervention differences existed in these scales, to strengthen the later findings of causality between independent and dependent variables. Only the mean of the level of agreement with “Forgoing Demands” in the control group was especially

low in the pre-test, which may have been due to the unbalanced gender distribution. In Asian society, many males tend to be dominant and intractable, and they are more keen on face-saving than females. However, there was no significant difference in total scores of concepts; thus, this pre-test difference did not threaten this study strongly.

Significant stress reduction in the bibliotherapy group was found in four areas ranked as follows: Financial Problems > Career Planning > School Work > Interpersonal relationships. However, Romantic Relationships and Family Communication did not show significant changes, perhaps because Zhuang Zi dealt little with this kind of close relationship. Personal Health was another non-significant dimension, possible reasons for which could be that most students are young and without serious health troubles, or they might have some chronic health problems that are not expected to be resolved in a few months. Analysis through stepwise multivariate regression, revealed that the most influential concepts in reducing stress were “Quit Stubbornness” and “Be Optimistic in Adversity”, which implied that loosening pre-programmed conceptions, and keeping hope at a low tide in life could be the crucial elements in coping with stress in most cases. Further detailed findings of the study and their implications are discussed in the next chapter.

CHAPTER SIX

CONCLUSION AND SUGGESTIONS

6.1. Contributions of this study

It was proposed that using bibliotherapy with Zhuang Zi's philosophy would reduce stress, and set the minds of the participants at ease. The results indeed show beneficial effects, suggesting that bibliotherapeutic intervention can be recommended for use by educational or health professionals as an alternative approach in coping with stress.

6.1.1. Overall findings

Zhuang Zi's philosophy is found in this study to have meaning for dealing with stress issues of modern life, as seen in the particular cultural setting of Taiwan. Since Taiwan is now an affluent industrialized society, this study implies that these concepts may be applicable as therapy in modern Western societies as well. The following are the important findings from comprehensive analysis of the data.

- **Accepting the concepts of Quitting Stubbornness and Being Optimistic in Adversity facilitates stress reduction**

After analysing all the data, it is found that the most influential predictors of stress reduction are the concepts of Quitting Stubbornness and Being Optimistic in Adversity. Stubbornness, refusing to make any change or concession, is similar to the defence mechanism "fixation" in psychoanalysis, whereby personality development may be

frozen and the individual may feel frustrated in life. Thus, it is better to change one's thinking if one is stuck by something. Generally speaking, stubborn people tend to evade change or even unconsciously deny reality, but the stress imposed by that reality still exists. Only loosening one's stubbornness can make life easy. Daoism holds that all things are intrinsically good for something, and need to be valued. There is no absolute best choice because any value criteria are set by people, who are imperfect. People would be free from worry if they could discard their preconceptions, and insistence.

Being Optimistic in Adversity means adopting converse thinking (contrary thinking) under difficult conditions. Creating turning points is crucial when confronting difficulty. Albert Einstein (1879-1955) famously said, "Imagination is more important than knowledge". This is because knowledge is immovable, but imagination can create many ideas and the possibilities for problem solving. Also, he indicated that people need to have a lively feel for values, and to vividly sense the beautiful and the morally good. Otherwise, specialized knowledge more closely resembles the mentality of "a well-trained dog". Generally, creativity may be destroyed by the disturbance of cognition (e.g., preconception), emotion (inflexibility), and culture (stereotypes). The strategy for stress reduction does not depend on how we ascribe blame to errors in a thing itself, but it depends on how we react. Being optimistic and thinking positively are medicine to heal frustration. Even the "stressed" can become "desserts" if we reverse the letters (Seaward, 1999), and positive thinking can lead people to react in a

constructive way. For example, one can re-evaluate stressors and redefine frustration from different perspectives. Receiving a grade D in a mid-term exam, if accepted constructively, might lead one to regard this result not as shame, but as a motivation to study harder and learn more deeply next time.

- **Career Planning stress reduction is significantly influenced by the concepts of Quitting Stubbornness, Managing Emotions, Freeing the Spirit, and Accepting Life's Fate.**

The concept of Quitting Stubbornness helps to loosen preconceptions in the process of Career Planning. Managing Emotions and Freeing the Spirit mean not being restricted by an outward adverse environment. Not to be upset or complain, and accept one's fate - that is life. Mosak (1977) thought that people need to confront and master the following tasks in life: (1) establish relationships with others (friendship); (2) contribute one's ability (work); (3) maintain intimacy (love and family); (4) enjoy oneself alone (self-acceptance); (5) spiritual development (values, life meaning, life goals and relationship with Nature). The last task is more abstract and seems to be hard to attain, but this is the essence of life. Zhuang Zi also emphasized the importance of spiritual development, in particular that the spirit cannot be imprisoned by outward temptations and addictions, and one should learn from Nature. As a result, Financial Problems and Career Planning stress levels are the top two items that can be decreased by both bibliotherapy and self-help groups, because Zhuang Zi's concepts seem to focus

more on how to reduce tension over such material pursuits or social reputation, but have less to say about the issues of interpersonal relationships and intimacy.

- **Reducing the stress of Financial Problems is mainly influenced by the concept of Removing Greed**

The increase in agreement with the Removing Greed concept has been shown to have a significant positive correlation with the reduction of Financial Problems stress level. In detail, the sub-concepts of the Removing Greed that are most influential in reducing Financial Problems stress are Nourishing Health and Managing Emotions. This finding is not surprising. Good health can contribute to overcoming financial challenges or avoiding expenses. The American thinker Ralph Waldo Emerson (1803-1882) said, “The first wealth is health.” However, many college students complain about insufficient sleep and feel listless because they take part-time jobs to earn income, but at the expense of their health. People who really understand the meaning of the Nourishing Health concept would be less concerned about finance compared to their health. Once people identify with some concept, the related behaviour would be more or less influenced, and it would become part of the individual’s habit and personality trait if the concept is rooted deeply enough. In Zhuang Zi’s philosophy, the Nourishing Health concept includes both bodily and spiritual health; in particular, spiritual freedom is the most important, even when one confronts destitution; one should not worry excessively about personal gains and losses.

- **Zhuang Zi's concepts may decrease aggressiveness**

The Interpersonal Behaviour Survey (IBS) was supplementally applied to investigate the effects of Zhuang Zi's concepts. It was found that acceptance of Zhuang Zi's three main concepts was significantly negatively correlated with self-reported aggressiveness in the bibliotherapy group. Freud (1953) proposed that aggression is the instinct of death beginning from one's birth. The aim of aggression is to release negative emotions and frustration. However, Rosenzweig (1978) indicated the concept of frustration-tolerance, which means that frustration is not necessarily the causer of aggression; people can tolerate it through certain mental activities. Cognition plays an important role in dealing with frustration or stress. Dodge (1986) established the "social information processing model of aggressive behaviours" to show how aggressive behaviour is influenced by cognitive processes, encompassing five stages: (1) encoding: receiving the content of outward stimulation; (2) interpretation: combining past experiences and new information to generalize events; (3) response search: searching for the pattern of response behaviours; (4) response decision: evaluating the effectiveness of the solution, which may refer to social expectations; (5) enactment: actively acting out.

The above stages show that cognition really plays a critical role in influencing behaviour. Zhuang Zi's concepts can help to facilitate reduction of aggressiveness during processing information in the following three dimensions: First, the Discarding

Prejudice concept can help people to think rationally and decrease negative attributions, such as animosity and hostility, jealousy. Secondly, Removing Greed can keep a person calm and patient while dealing with problems. Thirdly, Forgoing Demands is to engage in reverse thinking and provide more possibilities for problem solving. This is the reason why people who accept Zhuang Zi's concepts are less aggressive.

- **The demonstrated effects of bibliotherapy through Zhushng Zi's fables**

Bibliotherapy with group discussion is an optimal approach to explore Zhuang Zi's Philosophy. Group discussion facilitates not only exchange of information, but also reflection and creation of something new. Stress coping or problem solving needs more such inspired interactive activities. The Irish poet William Butler Yeats (1865-1939) said, "Education is not the filling of a pail; but the lighting of a fire." Group discussion can have the function of stimulating reflection. It is imperative for students to engage in creative thinking and mature interaction with others, be patient to listen to others and share, and learn how to clearly express their unique viewpoints. The dynamics of this interactive learning process can make students actively participate, not only act as passive receivers, but be involved. Brain storming sparks the fire and stimulates production of diversified viewpoints, as opposed to one-way inculcation of stereotypical learning.

6.1.2. The implications of the research

Except the significance of the results, there are some availability in implication and application of Zhuang Zi's concepts, especially in the hi-tech, competitive and polluted developed society.

6.1.2.1. People with a "Type A Behaviour Pattern" can be helped in stress reduction

People with "Type A Behaviour Pattern" are characterized as time-impatient, perfectionist, critical, uptight, hostile, aggressive, competitive, compulsive, demanding, or insistent in pursuing higher achievement. This personality type was defined by two cardiologists, Dr. Meyer Friedman and Dr. Ray H. Rosenman, who first proposed the Type A theory in scientific publications in the 1950s. Those with such a highly stressed lifestyle are believed to have learned it rather than having a genetic disposition, and they are susceptible to coronary heart disease (Friedman & Rosenman, 1974). Selye (1974) also articulated that people of Type A personality tend to be more stressed. Type A behaviour personality is also intensified by the phenomenon of urbanization and high concentration of population, and it becomes a chronic sense of time urgency, inability to enjoy a peaceful unstructured day, and a feeling of ambivalence, guilt, or insecurity while taking leisure. Zhuang Zi's fables may be able to help adjust the above characteristics through his concept of "Discarding Prejudice" to break the absolute criteria and distorted cognition, or loosen the obsessions of perfectionist behaviour.

Instead, we should listen to our inner needs, just relax in moderate speed, and not insist in accomplishing more things as quickly as we can.

Due to swift changes in social systems and communication instruments, people are used to being disciplined to efficiency. Even haste in eating and daily maintenance activities has become the stereotypical lifestyle in the metropolis. Modern people have what may be called Hurry Sickness/ Achiever Fever. Besides, the global standard of fast food has replaced traditional cookery. This has finally met with the voice of protest. For example, McDonald's Hamburgers fast food tried to establish its flagship in Rome in 1986. The residents opposed this foreign food culture, fearing for the disappearance of local food. Moreover, the amount of resources consumed by fast food is expected to grow quickly, likewise, increasing the profits for capitalists. Fast food industries employ large quantities of artificial fertilizer or growth hormone, which bring pollution and damage ecology. The Italian scholar Carlo Petrini founded the "Slow Food" association in Bra city in 1989. Later, many European countries followed. The organization now has 800 branches in 132 countries, and the numbers have been increasing. The principle of this association is to improve the beneficial relationship between the consumers and the food producers while ensuring ecological protection and organic food resources (www.slowfood.com). This reminds people to live a natural life, take time to exquisitely savour the aroma, colour, and combination, the essence of food, and appreciate the endeavour of making the food.

“Slowness” has been stigmatized over a long time; it is equated stereotypically with “inefficiency” or “laziness”. However, slow life is not merely anti-fast, but is intended to balance the needs of body and mind. We still can enjoy the speed and convenience of technological and economical inventions, but not everything needs to be rushed. Healthy slowness is in being aware of the quality of the relationship between environment and ourselves. People have reacted against fast food and fast life, and tried to avoid the anxiety produced by global competition. Some advocate a “carefree city”. In 1999, the mayor of Greve city in the Chianti District of Italy, Paolo Saturnini, initiated the Slow Cities movement against the fast urban lifestyle. City planning was employed to protect the traditional diet and culture, an “eco-gastronomic environment”. Also, he advocated unhurriedly and authentically experiencing daily life and reflecting on life values (Carl Honore, 2005; www.inpraiseofslow.com). This anti-fast value even eschews extreme sports that challenge human limits in order to reach outstanding achievements.

Such lessons may be particularly salient in the Taiwanese educational context. In recent Taiwanese colleges, the authorities carry out so-called “Excellence Planning” to cultivate the motivation for competition. Moreover, the schools exploit the students’ sense of shame to stimulate the urge to compete. They hold many competitions to praise excellence in every field, no matter how stressed the majority of the un-selected are. Likewise, teachers are required to produce certain amount of papers to be published

periodically; otherwise, they would have records that fall short of the requirements for advancement. We cannot ask for anti-excellence, but we can suggest letting things follow their nature, waiting for readiness, and balancing the various aspects of life.

6.1.2.2. Reducing desires facilitates achieving authenticity of the self

The ancient Greek philosophers, in particular Solon and the Epicurean school, advocated moderate use of material goods, temperate living, and maintaining equilibrium, as mentioned in Chapter Two. The ancient Chinese philosopher Zhuang Zi likewise proposed contentment with a simple life. However, modern psychotherapy does not focus on elimination of desires; it focuses more on overcoming impediments, and helps in accomplishing one's desires (Kohler, 1992). In Freudian psychotherapy, Freud (2000) called the instinctive motivation of individual behaviour "libido", which is controlled by the "pleasure principle", which is the primitive part of personality, i.e., "id". Basically, he argued, most people enjoy pursuing desires and pleasure; however, vexation arises from repeated reminders of unfulfilled desires. According to this view, if a desire cannot be satisfied, it is repressed in the unconscious, and silently and constantly influences personality development. A contrasting perspective can be seen in Zhuang Zi's idea that what we "need" is that which is enough to provide life. If people are extravagant and have too many "wants" and uncountable desires, that would cause stress in life. Zhuang Zi seems to suggest throughout that the root of problems is "too many desires", so he suggests removing one's greed, trying to go about life in a simple

way, and sublimating needs to the spiritual state. This is not to repress desires, but to make people aware of the traits and consequences of greed: excessive desires destroy the free spirit, impair health and well-being, bring interpersonal clashes, and enmesh people in endless pursuit of fame and fortune.

Scientific development has powerfully encouraged satisfaction of humans' various desires and indulgence in the material world. Gradually, people have become just objective, rational animals, and they have utilized this rationality as a tool as to control natural resources and seek maximum profits. Therefore, people lack subjective and authentic experience (Heidegger, 2005). In contrast, Zhuang Zi advocated setting the spirit free from outward trammels, and reaching tranquil and self-less mind state by discarding selfishness and distracting thoughts in order to reveal the meaning of being.

Wann (2007) in his book, "*Simple prosperity: Finding real wealth in a sustainable lifestyle*", mentioned why people seem to be unhappier when wealthy than when starting to pursue abundance of riches. An affluent life does not mean a happy life; people should go back to think about the quality rather than quantity of life. He also strongly urges preservation of nature and tradition. Duane (1982) advocated "voluntary simplicity", which is different from people living in forced poverty or asceticism; it means a lifestyle with voluntary choice that one may live for one's health, spirituality, or stress reduction. Simple living is a kind of anti-consumerist movement to minimize the pursuit of wealth and consumption. Duane (1993) said, "We can describe voluntary

simplicity as a manner of living that is outwardly more simple and inwardly more rich, a way of being in which our most authentic and alive self is brought into direct and conscious contact with living” (p.21). The more simple external life is, the more rich the internal life is. It is vivid and authentic to bring us directly into interaction with our own life. It may seem as if people become indifferent to the outward world when living such a plain and self-contented life. Definitely not, for instance, in all of the above approaches, a high value is placed on friendship. Mankind is a social animal. The aims of these philosophical positions are to free one’s spirit and create a real happy life, not only for oneself, but for others. Zhuang Zi advocated selflessness which means the absence of difference between oneself and others. It is selfish for one person to feel happy while others around are suffering. It is happier to share the way of gaining happiness with others, to make the world good as well.

6.1.2.3. Encouraging people to value spiritual freedom and life meaning in modern life

Many Taiwanese adolescents grow up in densely populated metropolitan areas like Taipei where life is fast, crowded, and tense. Taiwanese youngsters confront mounting pressures; they are pushed to rate “excellent” among their peers and compete for reputable schools or jobs. These pressures are often to the detriment of their well-being (Yi and Wu 2004). The advantages of the strawberry generation are that they are good at accessing information through the computer and surfing the Internet, but this seems to

bring an accompanying problem in youngsters' Internet addiction. Chou and Hsiao (2000) found that the incidence of Internet addiction was 5.9% among Taiwanese college students, and they reported that a high communication pleasure score was a high predictor for Internet dependence. Formally, this is called impulsive pathological Internet use, with inability to control Internet use, resulting in difficulties in personal life (Davis, 2001). Moreover, Taiwanese adolescents have a problem with depressed moods because of addiction to online activities in the areas of communication, entertainment, and information seeking. A positive relationship has been found between depressed moods and participation in risk behaviours such as substance abuse and reckless driving (Hwang, Cheong, & Feeley, 2009). A strategy for reversing this defect, Zhuang Zi's concept of Removing Greed, might be a feasible remedial auxiliary to challenge youngsters' Internet addiction behaviour, to guide them to think about their meaning in life, instead of escaping and seeking sensational pleasure. This is one of the main contexts for this study to utilize bibliotherapy as a means of problem solving and stress reduction.

6.1.2.4. Help people be ready to accept their fate

Existentialism tends to emphasise the meaning of individual existence; it sometimes also tends to pessimism, as seen in Friedrich Nietzsche (1844-1900). There is no way to bargain with life and its unchangeable, and innate restrictions; it is full of existential anxiety: the senses of anxiety, fear, and nothingness (May, 1999). People

could become nihilists if they were to sink into such extreme emotions for a long time.

From the viewpoint of existential psychotherapy (Yalom, 1995), the four ultimate concerns of life are death, freedom, loneliness, and the meaning of life. Ultimately people must go back into themselves for answers, and experience existential loneliness. It is hard to deny such loneliness, no matter how pleasurable it is to interact with others, or how satisfactory the self-identity that one had before. On the other hand, people can also gain strength through experiencing loneliness. Creating one's own life meaning and choosing what kind of life to live, instead of valuing oneself by others' identification, is central in this philosophy.

Living in a prosperous but competitive society with an uncertain future and potential crises, people would to a greater or lesser extent suffer anxiety which is inherent in the state of existence. However, Rollo May (1977) thought that anxiety is not solely negative; it can help us to be aware of our real selves if we confront it positively. Also, "A person can meet anxiety to the extent that his values are stronger than the threat" (May, 1967, p.51). From such an existential psychotherapy perspective, people are free to choose their way of life; meanwhile, they also need to take responsibility for the consequences.

Parallel to this, Zhuang Zi recommended that people should to do what they can do, then accept the results without worrying or complaining about their fate. Also, we should rationally regard birth and death as the natural process of life. Liu (1994) labeled

Zhuang Zi's philosophy a kind of fatalism. It may be said that Zhuang Zi's philosophy is a kind of fatalism, but it is a transcendent acceptance of fate that is not pessimism. Humans have many objective situations in life that are irresistible, and unfree; for example, we have no choice in deciding our birth, and death is inevitable in life. However, one can authentically be aware of one's existence. In fact, we tend to reflect more deeply on the meaning of life when we discover we are unfree, or in difficulties. The goal of awareness is not just knowing, but identifying our direction and departing from self-centredness. The fact of life restrictions and irreversibility must be recognized and rationally accepted.

6.1.2.5. The real happiness in life is spiritual contentment

Happiness is composed of three elements: pleasure, value, and freedom. However, pleasure is the most unstable element because not all pleasure can lead to happiness; for example, people with drug addictions feel extreme pleasure when intoxicated, but this is followed by sorrow. In contrast, the most important element of happiness is freedom, which can help the sense of happiness endure. Freedom in Zhuang Zi's definition includes two kinds: (1) the freedom attained from getting rid of material trammels; (2) spiritual freedom. The latter means the ability to behave voluntarily and exercise free choices (Zhu, 2009).

Happiness in life is not equal to adequate material provision. In 1972, the king of Bhutan stated that the essential problem of life is how to balance the material life and

spiritual life, so he proposed the “Gross National Happiness Index (GNH) to evaluate the level of civilian happiness, with indices including economic development, environmental protection, cultural development and governmental management. GNH means not only the degree of economic development, but also gives weight to the quality of spiritual life. GNH is not meant to be equivalent to the sense of happiness, which is an individual subjective feeling. Individually, one could feel happy if one gains more than expected; Conversely, one could feel unhappy if one gains less than expected. Actually, one could be much happier if one gains not only more than expected, but also more than others do. Therefore, comparison with others is more influential than comparison with one’s expectation, to bring forth the feeling of individual happiness. However, in low GDP (Gross Domestic Product), self-contained countries, feelings of happiness are not low because citizens lack reference to people of other countries, and it is easy to be self-content (Wang, 2008). In 2004, the GDP of Bhutan was only US\$ 1,969 (world average GDP is US\$ 8833); lifespan was 63.4 years old (world average is 67.3 years old); the rate of literacy for those over 15 years old was 47.0% (world average is 67.0%). In development terms, Bhutan ranks at 135 in over 177 countries (United Nations Development Programme, 2006). However, Bhutan is a remote and self-sufficient country in which people have little interaction with people outside, and are less tempted by a world of sensual pleasures and material goods. They live a simple life but are contented, no matter how lacking in material wealth. Bhutan is a poor but

happy country.

Chinese writer Qian (2008) thought that it is unnecessary to divide happiness into physical and spiritual happiness, because any enjoyment belongs to the spiritual realm, even though some enjoyment is induced by material things. For example, one can enjoy and feel satisfied with delicious dishes because of your spiritual happiness; in contrast, a person may have no appetite when they are angry, even when offered the most delicious dishes. The ultimate alchemy of spirit is to transform bodily pain such as in illness into spiritual calm, which can be the greatest victory over the material world. The true self needs to depart from the self that holds prejudice and greed (Zhuang Zi, ch.2), and in this process there is the transformation of self growth. People will possess real happiness if they are content with their life; contentment does not come from fighting with others or conquering Nature to gain personal profits.

The contemporaneous Confucian philosopher Meng Zi held a similar view, that it is a great happiness if one behaves with conscience without harm to others. However, Daoism gives much more emphasis to the mind state of tranquillity, i.e., to set the mind free from worry and pain, which could be said to be close to the Epicurean idea of pleasure. Although Epicureanism is a form of hedonism, as it is different from “hedonism” as it is commonly understood. It holds that the greatest pleasure is attained in the absence of bodily pain, and with freedom from fear, and a feeling of spiritual tranquillity through living a simple, virtuous and temperate life.

6.1.2.6. Living harmoniously according to the rules of nature

Accepting one's inevitable fate seems to be opposed to creating freedom. How can we reconcile this contradiction? Zhuang Zi deconstructed worldly preconceptions—we should as a result be exempt from worry about fame and fortune, and instead establish tranquility of mind, and interact harmoniously with all things. As life has its restrictions, we need to realize and accept this objective inevitability, then transcend and forget (i.e., not be bothered by) the differences and conflicts in life, and eliminate the apparent contradictions of opposition of subjectivity and objectivity. Not being distressed about life difficulties, the mind further goes into a state of tranquillity. That is what Zhuang Zi called “Xiao-Yao”, i.e., carefree, the absolute spiritual freedom (Liu, 1994). There are two dimensions regarding the principle of accommodation with the rules of Nature. One concerns the environment we live in; the other is the attitude with which we face difficulty in life. The basic principles are described in the following sections:

- **Do not destroy the natural environment with contrivances**

Maslow (1969) added one more need to his Hierarchy of Needs a year before he died, Spiritual Needs (Self Transcendence) in his “Theory Z”. He broadened our scope of thought to unlimited space and time, and proposed the consciousness of the cosmos. That is, we should give up a human-centric perspective, and instead take a universal-centric perspective. His Need Hierarchy seems to be subjective, and impossible to be checked by scientific verification. Nevertheless, the fact that a thing

cannot be verified, does not necessarily mean it is invalid.

Philosophical Daoists believed that people would suffer after-effects if they behaved contrary to the laws of nature or destroyed the ecological environment. There are many records of people seeking protection of the natural landscape for its philosophical value. The American writer Henry David Thoreau (1954) wrote in his book, *Walden*, “I was rich, if not in money, in sunny hours and summer days” to describe the placid relationship between humans and nature, and how he appreciated and cherished the beauty of nature. He is regarded as the first environmental protectionist. Also, Callenbach (2000) drew a “Green Triangle” and proclaimed that life should include ecology, frugality and health. Thus, it is important to cherish our earth resources, especially in hi-tech polluted society.

- **Forgoing Demands**

People with strong goal-orientation race with themselves and others, or showing off their achievements. This spirit of competition, refusing to take defeat lying down, is encouraged and praised in our society. From the psychoanalytic perspective, people with this personality type may feel insecure and afraid of being devalued. They seek to be regarded as valuable, and to be praised by others, exerting willpower at any cost, which may cause their life to be unbalanced or lead to a tendency to be compulsive. However, it is hard for them to see that modesty and patience are crucial to self-fulfilment. The value of such patience was asserted by the president of IBM,

Samuel Palmisano, who argued that the best way to live in such a uncertain era is to “hunker down”, and wait for the proper time to bravely change the world (www.businessweekly.com.tw.01/05/2009).

On the other hand, Zhuang Zi said there is no best way to get through. Instead, there are many alternatives in the world; people can take a route depending upon one’s fitness (Zhuang Zi, ch.1). But what is fitness? Developing according to one’s inclination, what comes natural to oneself. It is not demanding, but gaining insight into one’s inner nature and real needs that brings forth happiness.

6.2. Limitations of the study

While some positive effects of bibliotherapy have been found in this study, it is necessary also to be critical about the significance and applicability of these results. These are several aspects in which these results could be questioned. The research studied only a certain range of participants, and failed to present a wide range of subjects, due to limitation of resource conditions. This would undermine the external validity when seeking generalization to other groups. Also, the effect of an intensive three-month experiment is probably a short-term effect, and it is not evidence for long-term stress reduction; no periodic recheck or follow-up was performed. The details of the research limitations are described in the following sections:

6.2.1. Unbalanced samples

For a student researcher, it is not feasible to conduct a census or survey a huge sample. Thus, I could not help but adopt a quasi-experimental design with convenience sampling. The problem of gender imbalance appeared in this quasi-experimental research. There were more males than females in the study, reflecting the general gender imbalance in technological colleges. Within this study, males were much more represented than females, especially in the control group. However, the control group did not achieve a significant level of difference between genders in the measure of stress reduction. Therefore, this sample bias does not threaten the results much.

Although the purposes of the study has mentioned that it was desired to understand the students' real situation towards the questionnaire. However, some students may have tried to please the instructor in order to gain a better image, although it was strongly clarified that responses would be anonymous and there was no right answer; the best answer was to reply to the questionnaire authentically. Any attempt by participants to give "socially desirables" responses could reduce the validity. Moreover, all participants came from a technological college, so these thinking style was trained similarly. Thus, their feedback in discussion seemed to be less distinctive and sophisticated.

6.2.2. Limited group time

Due to the limited time in group sessions, it was hard to help the participants reflect deeply on Zhuang Zi's concepts, and probably most participants failed to make a

meaningful connection between personal past experiences and present insights. Although the three-month continuous experiment was implemented carefully, there might still have been some important information not discovered due to the limited group time. If group time could have been more sufficient, it might have facilitated stimulating brain storming to elicit more varied views, and reduced the tendency to rely on popular common-sense responses. Moreover, in this quantitative research, the issue of agreement level was the main concern, and it neglected to analyse the contents of verbal responses or even implications of nonverbal indicators. If it had been possible to extend the period of bibliotherapy and discussion sessions, that might have helped deeper exploration and enrichment of content.

6.2.3. It is hard to control all the dimensions in social situations

The social world is quite different from the natural world, and not all phenomena are suitable for scientific methods, As Schutz (1962) mentioned, the ability of self-reflection, social reality or daily lives cannot be explored in the same terms as the molecules, atoms and electrons of the natural sciences. This seems to entail objectively reifying the social world. However, artificial situations in laboratories may not be generalizable to the outside world. The reliance on instruments and procedures is an impediment to presenting everyday life. The social reality is not static, it is complicated with its continuous variations. For this reason, quantitative measures could suffer from low ecological validity.

In the control group, surprisingly, there was a significant difference in stress reduction concerning Interpersonal Relationships. Also, there was a significant correlation between stress reduction in School Work and acceptance of the Discarding Prejudice concept. The reasons for these unexpected significances in the control group cannot be ascertained because it is hard to control completely all the conditions present when studying human ideas; a social experiment is not as exact as controlled scientific experimental conditions in the laboratory. However, a possible reason for the effect in the control group is that students might have been aware of the objectives of the treatment. Although the control group students were informed that a survey was being undertaken for freshmen to understand students' general situation at the beginning and end of the semester.

Also, compensatory rivalry might have occurred, e.g., the control group behaved better than usual, and tried to compete with others when they found out the experimental group had a special programme. In contrast, the control group might have been angry and behaved worse than usual when they knew they were not the experimental group with a special programme this is called "resentful demoralization". A possible solution to such problem is compensatory equalization of treatments : e.g., other teachers give the control group some beneficial activity as compensation (Campbell & Stanley, 1966; Cook & Campbell, 1979).

Another possible explanation of the significances in the control group– it is

possible “Diffusion of treatment” that they learned about some aspects of the programme from friend in the experimental groups, e.g., during social relations inside or outside college. It would be difficult to keep the groups entirely separate and stop exchange of ideas between them, e.g., experimental participants have told friends in the control group what they had read and discussion. Besides, simply the effect of growing maturity and experience during the semester also would threaten the internal validity. Although a semester is quite a short time, starting college is quite a life-changing experience, and students might start to “grow up” in this situation. The researcher must carefully pay attention to the above potential jeopardizing factors as far as possible, because this would affect the validity and limit the ability to infer to the general situation.

Finally, the possible reason for the unexpected effects in the experimental group could be that students might have been aware of being observed, which made them perform better than usual, hiding their real responses, i.e., the participants might have been displaying “demand characteristics”, meaning that they modified their behaviours, and behaved differently and better than usual when they were aware of being studied. This is called the “Hawthorne effect” or “reactivity effect” (Cook, 1962). It could threaten the internal validity of research design, and cause bias if these results were generalized to others.

6.2.4. It is hard to measure life issues objectively

Psychotherapy is different from psychiatric diagnosis, which has its judgement criteria and exact objective procedure. However, any psychotherapy can be a kind of subjective field to explore invisible personal motivation, then in order to lead an individual toward self-fulfilment and mental health. In particular, it may be more subjective when discussing themes about life. In this study, several self-reported inventories were applied to investigate the participants' inner viewpoints and perceptions, without any scientific devices to detect their real or even unconscious responses. In fact, everyone's life is unique without an absolute right answer, but life is full of potential possibilities depending upon what we choose.

6.2.5. Fail to capture the holistic truth

Failure to see the trees for the wood (Failure to see the richness and details about individual experiences). Causality analysis involves analysing one or a few factors, which is too superficial, specific, reductionist, and directly reflects the external reality. There is a lack of deep exploration. As Bhaskar (1975, p.250) argues, "science, then, is the systematic attempt to express in thought the structures and ways of acting of things that exist and act independently of thought." Although quantitative research reaches a high degree of representativeness due to its large-scale samples and explicit experimental procedures, it might be superficial in the data analysis and interpretation, which could fail to capture fully the true experience of human beings and society. Thus,

scientific methodology is not the only absolute criterion for all circumstances. In particular, the human dimension has more potential, unexpected variables, and should be treated in more flexible ways.

6.3. Suggestions for further study

Despite the limitations of objective conditions, the results of this study are still believed to have acceptable validity. It would be possible to investigate whether this validity is stable enough through different kinds of samples in future study. The results could show more diversified and deeper meaning if more resources were available to the research, as follows:

6.3.1. Enlarge the samples

The first suggestion for future study is to extend the range of research participants, to include different ages, occupations, genders, etc. For example, the research could try sampling other schools located in the same districts, or even all over the country.

If the background of the subjects is more heterogeneous, the groups' responses may be more diversified. This would help broaden the perspectives for problem-solving. It may be better if the participants can be recruited from volunteers who have become bogged down in stress, or who have a strong interest in mental growth by reading, who feel at ease in groups and enjoy sharing ideas with others, or even whose views tend to be concrete and profound, which would facilitate the group dynamic.

On the other hand, larger numbers of participants would need to be divided into

several small bibliotherapy groups in order to let each member have the most care. Before the experiment, it would be necessary to carefully train and evaluate the instructors of each group for months. Such training plays the critical role in bibliotherapy and determines the effectiveness of the experiment.

6.3.2. Apply bio-feedback instruments to gain empirical proof

Self-reported questionnaires retrieve the participants' subjective perceptions, but lack empirical measures. The research could be made more objective and persuasive by utilization of scientific devices such as bio-feedback instruments, e.g., measures of heart beat, blood pressure, brain waves, EDR (ElectroDermal Response), or GSR (Galvanic Skin Resistance responses). For instance, Zhuang Zi proposed the approaches of self-cultivation to reach a carefree state, such as "Mind Fasting" and "Meditation". Most articles discussing these themes are based on qualitative research. Somehow, these lack scientific persuasiveness. It would provide an impersonal empirical inference if the researcher could auxiliarily adopt scientific tools to measure the biophysical responses while the participants are in the process of meditation.

6.3.3. Combining individual therapy or other psychotherapy with bibliotherapy

"The therapist-directed strategy" in bibliotherapy is that in which the researcher collects relevant materials during the therapy sessions by assigning homework or other intervention activities (Glasgow and Rosen, 1978, 1979). This is very helpful in correlating participants' individual life to the therapy. In this way, the therapist could

have more background information about the participants, to identify the problem issues that need to be worked through. There are many available approaches that can be combined with bibliotherapy, such as the Socratic method or existential psychotherapy.

In “*The Collected Dialogues of Plato*” (Plato, 1963), it is recorded that Socrates (470-399 B.C.) thought that wisdom comes from one’s inner mind and rationality, and can not be inculcated by others. People need to be modest to acknowledge ignorance, and learn through Socratic questioning to inquire into life problems. Meichenbaum (1977) adopted “the Socratic method” in his coping-skill programmes, which can be applied in the period of discussion. Likewise, Beck (1997) regarded Socratic dialogues as a therapeutic skill for clarifying and transforming clients’ maladaptive beliefs and negative thoughts. The approach in Socratic dialogues is not an authoritarian therapeutic relationship, but a cooperative relationship to help clients to be more aware of themselves. After reading, the participants could clarify the metaphors in the fables through the three steps of Socratic questioning method as follows:

1. Defining terms: Therapists ask clients to describe more specifically and exactly what they have mentioned, especially to elaborate the key words.
2. Deciding rules: Therapists help clients to identify the relationship between their emotions and situation, searching out any illogical inferences from the client.
3. Finding evidence: Clients are asked to provide evidence or facts to support their inferences. This process employs high-level empathy to help clients to be aware of

their feelings, emotions, symptoms, and irrational beliefs.

What is love? What is courage? What is justice? Socrates thought that people felt confused only because of a lack of logical analysis and reflection. He just brought out the knowledge from innate concepts that the answerer already had, so he called himself a “maternity assistant”. This Socratic method can be employed in groups. It can also be employed in self-talk, for example, asking oneself, “What is the bias?”, “How did your mom annoy you?”, and “Did your mom have any bias?” The Socratic questioning method can improve participants’ ability to reflect critically, and challenge their independent thinking.

Moreover, existential psychotherapy too, can help clients to clarify, questioning their perspectives about the outward world, and deeply reviewing their present value systems. However, existential psychotherapy is a process of unceasing discovery which has no concrete therapeutic skills, but the main concern is to establish authentic therapeutic relationships whereby therapist and client explore life meaning together, in order to help clients to find their own way out in life. Ideally, in the therapeutic process, the self of the client and therapist meet each other and empathize sincerely, i.e., I/thou encounter (Yalom, 1995). Only when the solutions are internalized in the individual can the therapy prove really effective; solutions are not retrieved from instruction or others’ sharing.

6.3.4. Deepen by qualitative research

It has been shown that participants' way of thinking determines how they deal with emotional disturbance, interpersonal problems, and personal career difficulty. Nevertheless, the process of this transformation is complicated, abstract and hard to measure. For this reason, there would be value in qualitative analysis. This can help unveil the track of psychological intention agony, how participants confront issues, and what they value. Direct interviews with clients may produce a closer approximation to the truth. Qualitative analysis is not only intended to understand the phenomenon/behaviour itself and life history, but also to find the real causation, inner drives, and symbolized meaning. For example, what important life events have happened? what critical TV programme have the participants watched? What influential person did they meet during the therapeutic period? Such insights would be especially helpful in understanding the participants who changed the most. For example, the control group may learn about the related readings unexpectedly when they hear about the experiment being conducted in the experimental group (i.e., diffusion of treatment). Such matters are out of the researcher's control. If a qualitative approach can add be incorporated, that may contribute to making the results more holistic, profound, and individualized.

Due to the limited resources available, the aims of this study focused on investigating whether students' beliefs are influenced by bibliotherapy through a quantitative approach, i.e., the interactive effects between Zhuang Zi's concepts and

stress reduction, and it employed only quantitative assessment. However, this study lacked detailed analysis of discussion content. Also, the reasons why and how the participants changed are not identified. In further study, including more activities to deepen the effects might be suggested, for example, writing a stress diary or essay after reading, sharing and receiving feedback from group members in the next session. Moreover, the leader could additionally invite the participants who reduce stress the most to undergo formal in-depth interviews regularly within focus groups to explore implied meaning or tacit knowledge (i.e., somatic feelings). Another possibility would be to monitor these three groups over 6 months, in a longitudinal study or developmental study, to investigate the long-term effects of bibliotherapy. Besides, there are numerous available qualitative psychotherapeutic approaches available, such as poetry therapy, narrative therapy, art therapy, or philosophical counselling. The latter is much closer in characteristics to the implication of Zhuang Zi's fables, and it is therefore described in details in the following section. The benefits of combining quantitative and qualitative approaches are as follows:

- **To cross check the results and enhance the validity**

Objective reality can never be grasped completely, or captured in a single way. Thus, researchers can use multimethods that provide a variety of ways to perceive the world from different perspectives, or secure an in-depth understanding of the phenomenon in question, which can be used for cross checking the results and reaching

validation (Denzin, 1989; Fielding and Fielding, 1986; Flick, 1992). For example, Newby (1977) conducted some participant observations to support the main structured interview, in order to make valid inferences from the survey data. Also, insights gained from participant observation can be examined for effectiveness against knowledge gained from the survey. In other words, qualitative research can be very beneficial to quantitative researchers in checking and revising their understandings of the data.

Qualitative research can also help quantitative research to be conducted in a more valid way. For example, Smith and Robbins (1982) in their multisite, multimethods study of parental involvement in Federal Educational Programs found that their ethnographic data facilitated construction and path analysis of their survey data. Woods (1979) conducted his investigation using survey procedures in tandem with participant observation to increase its validity. Moreover, Whyte (1976) in his strategy of “Weaving back and forth among methods” found that qualitative research not only can lead to the formulation of potential hypotheses for confirmation by a quantitative approach, but also has potential validity for reconceptualizing the in-depth implications.

On the other hand, it is difficult to persuade readers when a qualitative method with low reliability is employed. Thus, sometimes, researchers in tandem employ a quantitative method, in order to increase reliability. Silverman (1985) has suggested that the use of “Simple counting techniques” enables qualitative researchers to survey bulky data, and present readers with an overall view of those data. Basically, quantitative

research on a large scale possesses a higher reliability and representativeness, so such quantitative information can be used to establish the generality of the researcher's observations.

- **Integrating the researchers' and participants' perspectives**

Quantitative research uses a variety of structured interviews and questionnaires which are designed only based on the researchers' perspectives. However, qualitative research can compensate for this deficiency of the quantitative approach by using unstructured, lengthy in-depth interviews and open questions which tap into the participants' perspectives. We can effectively gain the overall views of both researchers and participants by blending quantitative and qualitative approaches.

- **Integrating the macro and micro levels**

Quantitative research establishes the data on a larger scale, it is regarded as the investigation of the macro level of social reality, whereas qualitative research is concerned with the micro level. In other words, quantitative research is used to investigate macro phenomena, qualitative researchers study small scale phenomena at the micro level, such as using Marxist ideas in school ethnographies (Bryman, 2001). How can the macro and micro gap be bridged? Duster (1981) employed "the metaphor of a ladder" to indicate how macro and micro levels of analysis might be bridged, by finding the "intermediate rung" to facilitate their integration.

In summary, there are still many differences of philosophical perspectives on the

relative merits of quantitative and qualitative research. It is difficult for one to supplant the other. However they can supplement each other, providing us with various perspectives for thinking and knowing how the world is conceptualized, enriching our views. It is very important that researchers choose appropriate methods in the light of the epistemological implications of the research questions.

6.3.5. Bibliotherapy can be combined with philosophical counselling for deepening one's reflection

Applying philosophical counselling to bibliotherapy is good way to deepen peoples' reflections through the systematic thinking of philosophy. The German psychologist Wilhelm Wundt established the first scientific psychological laboratory in 1879. Thus, psychological issues become independent from philosophy; that until 1981, when Gred B. Achenback launched philosophical counselling, established "The German Association for Philosophical Practice", and published a journal in 1982. Later on, philosophical counselling spread world-wide (Marinoff, 2002). Actually, Chinese people have long relied on philosophy as a healing auxiliary for comforting the suffering mind. In China, Confucianism, Daoist philosophy, and Buddhism are living philosophies that not only provide a way to deal with personal issues, but also deal with relationships with other people, society, or even nature.

Although Corey (2009) pointed out that many psychotherapy practices had adopted certain philosophical perspectives, such as existential psychotherapy, logotherapy,

gestalt therapy, client-centered therapy, rational emotive therapy, transactional analysis, etc., Achenback indicated that philosophical counselling is not the same as psychotherapy, because the clients of the former have no psychotic disease, only entangled life issues. The basic themes in philosophy revolve around desires, attempts, beliefs, bias, values, etc. The core life problems are often related to these (Raabe, 2001). Strictly speaking, the process of philosophical counselling needs to adopt the mode of thinking of a philosophical system, including the basic fields of metaphysics, epistemology, and value philosophy. Philosophy can help stimulate people to think more deeply, become aware of incorrect premises and hypotheses, clarify the essence of the problem, effectively discard distorted beliefs, and set aside their worries, and at the same time create positive perspectives of life, improve life quality, and attain a philosophical lifestyle (Schuster, 1999).

Nowadays, philosophers are more concerned with practical issues, and they help people solve problems in real life. Therefore, philosophical counselling becomes another respectable choice in counselling. However, counselling should not preach, but needs to face problematic cases and provide real help in working through problems. In particular, interpersonal conflicts may serve to reveal our problems and decode our life missions. For example, the novel *The Schopenhauer Cure* (Yalom, 2005) and the self-help book *Plato, not Prozac! Applying Philosophy to Everyday Problems* (Marinoff, 1999) include many cases healed through philosophical counselling.

The main difference from traditional counselling is that philosophical counselling focuses on rational interaction instead of emotional catharsis. Philosophical counselling is a goal-oriented approach which is more inclined to an educational dimension, suggesting ideal answers. It emphasizes universal and holistic knowledge, and focuses less on investigating individual differences and traumatic experiences. Thus, this approach is not suitable for clients with serious emotional disturbances and psychotic diseases.

6.4. The possible extension of the findings in this study

Bibliotherapy has been proved to work effectively in educational and health settings. It can be further explored whether bibliotherapy adopting Zhuang Zi's concepts can also make an impact on other dimensions such as improving self-efficacy, establishing a mature personality, or improving interpersonal relationships. It could also be applied to different groups, such as mental growth organizations, enterprise cooperation, elders associations, or high stress work places, etc.

Employing Zhuang Zi's fables in western society might confront problems of cultural translation. Though familiar in Asian society, the fables might seem outlandish in Europe. Even the fact that they are foreign in source might be off-putting to some people. Many people have subjective pride in their own culture. However, anthropologists utilize cross-cultural experience to reflect on their own culture and society. That is, since one is immersed in one's own culture and beliefs, one cannot

perceive the problems until challenged by a different culture's beliefs. In fact, the cultural gap is closing under globalization in the information era; cultures interact, reflect, and merge every day.

6.5. Final statement

Carl Rogers (1990), in his book "*On becoming a person: A therapist's view of psychotherapy*," mentioned that most psychologists would feel insulted if they were criticized for thinking about philosophical questions. However, he thought he was exceptional, and he could not help but seek meaning from observed phenomena. He was interested in what meaning the individual is seeking for, what is the purpose of our life. He summarized that the meaning must have the sense of existence in life. People must become who they really are. Rogers also quoted the saying of the Chinese founder of philosophical Daoism, Lao Zi, that the way to do is to be. All people are unique and have their nature. Being one's true self brings real happiness.

The aim of bibliotherapy is to improve individual mental growth by psychological interaction with works of literature. The literature context plays a crucial role in the therapeutic process. Based on the results in this thesis, Zhuang Zi's fables are demonstrated to be an effective medium to help students adjust their habitual way of thinking and life values, and explore an alternative to reach a carefree life. Spiritual happiness is of essential importance for being a person. However, many people value themselves according to outward achievement in society, and people struggle to

overcome the frustration in order to get there. Thus, life becomes unbalanced. Many psychologists indicated that behaviour is motivated by desires and pursuit of what we do not have. Abraham Maslow (1908-1970) advocated positive psychology (being psychology) that emphasized “having”: we must value what we have, what we can do. People spontaneously approach self-fulfilment and attain joy with a positive and healthy perspective. The aims of psychotherapy are to increase self-understanding, love, courage, creativity, curiosity, but decrease anxiety and hostility (Yalom, 1995). However, Maslow’s perspective can be called into question because his study only focuses on the behaviour of healthy/normal people, but neglects the behaviour of abnormal people. Nevertheless, everyone has innate potential. The more positively one believes, the more latent capacity would come out. This is called “Self-fulfilling Prophecy”, or the “Pygmalion Effect”.

In the book, “*The last intellectuals*”, Jacoby (1987) argued that most contemporary intellectuals hide themselves in an academic ivory tower to produce and accumulate papers to upgrade their position. They really care less about the future of humanity, and do not appeal to righteousness in public forums as did intellectuals in the 1970s- 80s. Since then, the mass media have taken over intellectuals’ role in educating the people, and it misleads people in the direction which conforms to economic and commercial interests. Generally, peoples’ knowledge and values are shaped unconsciously, and they are less introspective about life. Socrates said that a life not inspected is not worth living.

In this era full of paradoxical values and political tricks, intellectuals should be brave enough to tell the truth, and suggest conscientiously the best lifestyle, even though this is against the mainstream, and involves acting in a way opposite to the authority. It might weaken peoples' commercial desires, economic prosperity, or offend political forces. Such a mission should be rooted in the minds of intellectuals, to be concerned with peoples' real happiness and help them towards healthy practices in body and mind.

6.6. Summary

The important findings of this study are as follows:

- (1) Reducing the stress of Financial Problems is mainly influenced by the concept of Removing Greed;
- (2) Career Planning stress reduction is significantly influenced by the concepts of Quitting Stubbornness, Managing Emotions, Freeing the Spirit, and Accepting Life's Fate;
- (3) Accepting the concepts of Quitting Stubbornness and Being Optimistic in Adversity facilitates stress reduction;
- (4) People with a "Type A Behaviour Pattern" can be helped in stress reduction;
- (5) Females are more influenced than males in stress reduction by bibliotherapy intervention; however, males are more influenced than females in stress reduction by self-help bibliotherapy.

Now that the impacts of bibliotherapy have been identified, how to develop its

great utility as an aspect of stress coping influences has become a prominent task. At the conclusion of this research, there are some suggestions for further study:

- (1) Apply the intervention to different groups: such as mental growth organizations, enterprise cooperation, elders associations, or high stress work places, etc.;
- (2) Apply bio-feedback instruments to monitor physical responses: e.g., measures of heart beat, blood pressure, brain waves, etc.;
- (3) Combine individual therapy or other psychotherapy with bibliotherapy: such as psychoanalysis, writing therapy;
- (4) Deepen by qualitative research to make the research richer and more detailed in the individual contexts of clients.

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Appendix 1-1: Differences between pre-industrial, industrial and post-industrial society

	Pre-industrial	Industrial	Post-industrial
Regions	Asia Africa Latin America	Western Europe Soviet Union Japan	United States
Economic sector	Primary extractive: agriculture mining fishing timber	Secondary goods producing: manufacturing processing	Tertiary: transportation utilities Quaternary: trade, finance, insurance, real estate. Quinary: health, education, research, government, recreation
Occupational slope	farmer miner fisher unskilled worker	semi-skilled worker engineer	professional and technical scientists
Technology	raw materials	energy	information
Design	game against nature	game against fabricated nature	game between persons
Methodology	common sense experience	empiricism experimentation	abstract theory: models, simulation, decision theory, system analysis
Time perspective	orientation to the past; ad hoc responses	ad hoc adaptiveness projections	future orientation forecasting
Axial principle	traditionalism: land/resource limitation	economic growth: state or private control of investment decisions	centrality of and codification of theoretical knowledge

Source: Bell, 1974, p. 117

Appendix 1-2: The analysis of health habits and problems of college freshmen in Taiwan

Items	Total		Female		Male		χ^2	P-value
	N	%	N	%	N	%		
Hours of sleep								
Over 7-8 hrs	6155	32.3	2856	28.2	3299	37.0	168.1	p<0.01
Under 7-8 hrs	12431	65.3	7017	69.3	5414	60.7		
Often insomnia	463	2.4	258	2.5	205	2.3		
Eat breakfast								
Everyday	11547	67.6	6544	71.4	5003	63.3	136.7	p<0.01
Seldom	5351	31.3	2564	28.0	2787	35.3		
Never	173	1.0	61	0.7	112	1.4		
Do exercise								
Yes	7274	39.2	2549	25.6	4725	54.8	1649.7	p<0.01
No	11287	60.8	7393	74.4	3894	45.2		
Smoking								
No	16377	85.2	8965	87.5	7412	82.4	97.6	p<0.01
Yes	2856	14.8	1278	12.5	1578	17.6		
Drink alcohol								
None	15166	78.8	8788	85.8	6378	70.9	644.6	p<0.01
Seldom	4048	21.0	1449	14.1	2599	28.9		
Often	26	0.1	4	0.0	22	0.2		
Chew betel nuts								
No	19209	99.9	10239	100.0	8970	99.8	15.0	p<0.01
Yes	23	0.1	3	0.0	20	0.2		
Anxiety/Depression								
Very seldom or never	10832	56.5	5489	53.7	5343	59.6	67.6	p<0.01
Occasionally	7744	40.4	4394	43.0	3350	37.4		
Often	606	3.2	334	3.3	272	3.0		
Chest tight								
Very seldom or never	13985	72.7	7211	70.4	6774	75.4	60.8	p<0.01
Occasionally	4867	25.3	2796	27.3	2071	23.0		
Often	372	1.9	229	2.2	143	1.6		
Stomachache								
Very seldom or never	12031	62.6	5788	56.5	6243	69.4	399.9	p<0.01
Occasionally	5989	31.1	3577	34.9	2412	26.8		
Often	1214	6.3	874	8.5	340	3.8		
Headache								
Very seldom or never	10854	56.5	4939	48.2	5915	65.8	665.9	p<0.01
Occasionally	7213	37.5	4441	43.4	2772	30.8		
Often	1158	6.0	859	8.4	299	3.3		

Source: Lee, C. W., Hwang, Y. T., and Yen, C. W. (2008). The analysis of health problems and health defects of college freshmen in Taiwan. *School Hygiene*, 53, 1-16.

Appendix 1-3: The glossary of terms

Bibliotherapy: Strictly defined, is the use of selected reading materials as a medium in problem-solving or development needs. It involved follow-up activity under professional psychological guidance, or combined with other form of psychotherapy. However, more and more self-help materials/manuals are being prescribed by trained therapists, with minimal therapist contact or even no therapist contact. This is also deemed as a type of bibliotherapy, i.e., totally self-help bibliotherapy and minimal therapist contact bibliotherapy.

Compensatory equalization of treatments: Teachers give the control group some beneficial activity as compensation for not receiving the intervention.

Compensatory rivalry: The control group behaves better than usual and tries to compete with others when they know the experimental group has a special programme.

Demographic variables:

Gender: 1. male; 2. female; 3. other;

Department: 1. Mechanical engineering; 2. Electrical engineering; 3. Electronic engineering; 4. Communication engineering; 5. Information management; 6. Marketing and distribution management; 7. Industrial management; 8. Materials and textiles; 9. Health care administration;

Parental status: 1. Parents both present in family; 2. Single parent (separated, divorced, deceased); 3. Others (e.g., both deceased);

Residential status: 1. home with family; 2. outside residence (including in school dormitory and other places)

Diffusion of treatment: The control group may learn about the related readings unexpectedly when they hear about the experiment being conducted in the experimental group.

Ecological validity: Verify whether the research findings can be applied to daily life or not.

Emic perspective (microcosmic perspective): Based on the insider's subjective view but may cause the fallacy of subjectivism

Etic perspective (macrocosmic perspective): Based on the outsider's objective view but may cause the fallacy of "dataism" if researchers only believe in objective data

External validity: Concerns the degree to which results of a study can be inferred to be true for other cases. In other words, it is about whether findings can be validly generalized. An auxiliary instrument IBS was added to confirm the validity of bibliotherapy, which can increase the external validity.

Gp 1 (Bibliotherapy experimental group): Full treatment exposure, i.e., reading material, assignment, discussion.

Gp 2 (Self-help experimental group): Reduced treatment exposure, i.e., assignment.

Gp 3 (Control group): No treatment exposure

Hawthorne effect (i.e., reactivity effect): The subjects may be aware of being observed, which makes them perform better than usual, or be afraid of revealing their real conditions, so they hide their true responses and try to meet social expectations.

Internal validity: It is an inductive estimate of the degree to which results about real causal relationships can be made, based on the measures used, the research setting, and the whole research design. i.e., there may have latent factors interfering with the causality between independent and dependent variables. The confounding factors need to be decreased as less as possible.

Interpersonal Behaviour Survey (IBS): There are three subscales, Aggressive Behaviour, Assertive Behaviour, and Passive Behaviour

Philosophical Beliefs toward Stress Coping Inventory (PBSCI): This is a five-point scale, Strongly disagree=1; Disagree=2; Partially agree=3; Agree=4; Strongly agree=5

Philosophical counselling: Strictly speaking, it involves helping clients clarify the problem and creating another valuable perspective by adopting the mode of thinking of a philosophical system, including the based fields of metaphysics, epistemology, and value philosophy. Gred B. Achenback launched philosophical counselling in 1981, established “The German Association for Philosophical Practice”, then published a journal in 1982. Later on, philosophical counselling spread world-wide.

Quasi-experimental design: The subjects are not assigned randomly into experimental or control groups, groups already exist. There is less control of the subjects and also the findings can be replicated in real-life settings

Random error (chance error: This error is caused by individual psychological factors without any systematic pattern, e.g., attention, motivation, emotions. This would cause inconsistent reliability.

Resentful demoralization: The control group sometimes might feel they are treated unfairly, so they refuse to be tested or respond randomly

Socratic questioning method: (1) Defining terms: Therapists ask clients to describe their problems more specifically and exactly, and especially to elaborate the key words; (2) Deciding rules: Therapists help clients to identify the relationship between their emotions and situation, searching out any illogical inferences from the client; (3) Finding evidence: Clients are asked to provide evidence or facts to support their inferences. This process adopts high-level empathy to help clients to be aware of their feelings, emotions, symptoms, and irrational beliefs.

Stress Level Scale: This is a five-point scale, No stress= 1; Low stress= 2; Moderate stress= 3; High stress= 4; Very high stress = 5

Stress Level variables: There are seven kinds of stress in this study, including School Work, Personal Health; Interpersonal Relationships; Romantic Relationship; Family Communication; Career Planning; Financial Problems; and Total Stress (i.e., sum of the above seven stress levels).

Stress: Failure to reach the ability of accommodation towards the circumstance and the degree of self satisfaction.

Stressor: The cause of the stress

Systematic error (constant error): This error can be caused by external environment, e.g., the experimental environment not being well controlled, or inexact measuring tools being adopted. Such error may be overestimated or underestimated to every case. However, its reliability is consistent, but its validity would be inexact.

Chinese terms

Carefree (Xiao Yao Yu): In Zhuang Zi's concept, it means spiritual freedom, spiritual transcendence, release, but not proclaiming behavioural freedom or fighting for rights.

Confucius (Kung Zi, i. e., Master Kung, 551-479 B.C.): Confucianism is the mainstream principle for practising moral culture and strengthening the social order, a philosophy which continues to be dominant in Chinese society to the present.

Dao: "The Way". It is hard to describe completely in words due to its abstraction and holism. Generally, "Dao" has been translated into "Way" or "Path", "The way of Nature", "The natural course of things", or "The operational rule of Nature".

Daoist philosophy (starting from 6th century B.C.): Also known as "Dao Jia", "Lao-Zhuang philosophy".

Daoist religion (starting from 2nd century A.D.): Also known as "Dao Jiao", some of whose ideas were gained from Lao Zi, but transformed into folk religion in the form of Daoist priests, Daoist canon, rites, and temples.

Lao Zi (born around 550 B.C.): The founder of Daoist philosophy. "Dao De Jing" is his writing.

Non (i.e., "Wu" in Chinese): It does not really mean "nothing" or to give up doing something, but means to "transcend" it. i.e., one could still "have", but not be restricted by something. Thus, "Non-knowledge" ("Wu Zhi" in Chinese) means not to be restricted or confused by the present knowledge, but not mean to give up or devalue knowledge. "Non-dependence" ("Wu Dai" in Chinese) means not to depend on or be bound by a certain thing. "Non-desires" ("Wu Yu") means not to be enslaved by desires. "Non-doing" (Wu Wei) means doing naturally without contrived intentions.

Sinologist: Scholar of Chinese culture, e.g., the Oxford University Sinologist, Professor James Legge (1814~1897), Benjamin I. Schwartz (1916-1999).

Vision form: A mental state that indicates that whenever one reaches a particular level of insight, your vision or perspective about the world is based on that level.

Xu: Vacuum, openness, self-less is the mind state which keeps the capacity of the mind space to be open and calm.

Zhuang Zi (369-286 B.C.): Daoist philosopher. Zhuang Zi condemned the rotten political force and bureaucratic hierarchy, and advocated spiritual freedom.

Zhuang Zi's main concepts: (1) Discarding Prejudice; (2) Removing Greed; (3) Forgoing Demands

Zhuang Zi's concepts:

Discarding Prejudice: Be Selfless, Seek Knowledge Beyond Language, Quit Stubbornness, Treat Others Equally;

Removing Greed: Nourish Health, Manage Emotions, Purify the Mind, Free the Spirit;

Forgoing Demands: Accept Life's Fate, Be Optimistic in Adversity, Embrace Flexibility, Accommodate to Nature, Accept Birth and Death.

Appendix 2-1: The chronological development of bibliotherapy

Year	Source	Contribution
384~322B.C.	Aristotle	He thought that reading Greek tragedies can purge people and has a cathartic effect which helps to heal maladies (Morrison, 1987; Hynes & Hynes-Berry, 1986).
	Ancient Greeks	The ancient Greeks inscribed “The Healing Place of the Soul” on the entrance to the library at Thebes. They were the first to associate mental health with books, which they regarded as a helping resource (Zaccaria & Moses, 1968).
	Ancient Romans	They perceived that patients reading orations might help their mental health.
1272	The Egyptians	They recommended patients to read <i>The Qur'an</i> in order to assist medical healing at Al-Mansur Hospital in Cairo.
18 th Century	Europe	Some mental hospitals set up their own libraries.
Late 18 th Century	European Humanitarians	Reading was used to help the insane, and it was regarded as a recreation as well.
1802 & 1810	American physician: Benjamin Rush	He was the first American to recommend reading, including fiction and religious materials, for the sick and mentally ill.
1821	America	The first library for patients in America, Massachusetts General Hospital, which had a religious orientation (McClaskey, 1970).
1904	American Librarian: E. Kathleen Jones	She was the first qualified librarian to use books in helping the mentally ill.
1916	Samuel McChord Crothers (essayist)	He first coined the term “bibliotherapy”. This term is derived from the Greek <i>biblion</i> (book) and <i>oepatteid</i> (healing).
World War I	U.S. Veterans Administration (VA)	Librarians and the Red Cross built libraries in the army hospitals to treat veterans’ illnesses and for rehabilitation. At the end of the War, the VA managed these hospitals, including their libraries. Later on, VA librarians contributed in producing relevant articles.

1928	Edwin Starbuck	He edited a “Guide to Children’s Literature for Character Training” which was sponsored by the Institute of Character Research at University of Iowa. In 1919, this Institute was awarded a national prize for character education methodology. The aim was to apply a dynamic approach to enable children to learn morals through literature, art, music, etc., instead of preaching.
1941	Dorland’s Illustrated Medical Dictionary	Bibliotherapy is defined as “the employment of books and the reading of them in the treatment of nervous disease”.
World War II		The need for bibliotherapy through hospital libraries increased.
1952	Veterans Administration	Edited “Bibliotherapy in Hospitals” with a list of references for hospitalized mental patients.
1961	Random House Dictionary	Defined bibliotherapy as “the use of reading as an ameliorative adjunct to therapy”.
1961	Webster’s Third New International Dictionary	“The use of selected reading materials as therapeutic adjuvants in medicine and psychiatry; also: guidance in the solution of personal problems through directed reading.”
1964	American Library Association (ALA)	The first national bibliotherapy workshop was sponsored by ALA.
1966	American Library Association	They adopted the definitions from Webster’s Third New International Dictionary.
1969	Jack Leedy	He founded “The Association for Poetry Therapy” (APT) in New York.
1979	Rhea Rubin	In America, the 1970’s was called the “ Me decade ” because of emphasis on individualization. Some deviant people, such as the insane under hospital treatment, prisoners, or juveniles from reformatories, were asked to leave protective custody, and attend special programmes in their residential communities. Thus, bibliotherapy began to be used to help normal residents of the community who needed

		to adjust to these immigrants. The functions of bibliotherapy have become more educational and developmental ever since. With this social trend of the 1970's, self-help and personal growth books became prevalent, that inspire the reader to "do it yourself" (Rubin, 1979).
1986	S. Starker	He surveyed 487 practitioners who worked in a U.S. metropolitan area, and found that 88 % of psychologists, 59 % of psychiatrists, and 88 % of medical doctors had employed bibliotherapy in their practice (as cited in Pardeck & Pardeck, 1993).
1987	Atwater & Smith	They reported that bibliotherapy was extensively employed by counsellors (as cited in Pardeck & Pardeck, 1993).
1988	Goleman & Ganong	Self-help materials (nonfiction resources) are for information gathering and decision-making strategies.
1994	Pardeck	Literature was found to be a tool to help cope with stress (Pardeck, 1994a).
1995	Newton	He stated that "Bibliotherapy is the process of having students read books containing characters whose conflicts are similar to the readers' in order to help them understand and cope with their own conflicts" (Newton, 1995, p.14).
1995	The Literacy Dictionary	Bibliotherapy is the use of selected writing to help the reader in improving awareness or problem solving (Harris & Hodges, 1995).
2003	Campbell & Smith	Research findings showed that bibliotherapy is not the sole treatment, and has to be combined with psychotherapy (Campbell & Smith, 2003).

Note: sources without reference are all cited from Rubin, 1978a

Appendix 2-2: The prescriptive analysis of Starker’s questionnaire items/self-help readers vs. non-self-help readers (in part)

	Items Endorsed	Non-SH readers	SH readers	N	χ^2 *	p
1.	I read a lot about health	37	55	161	4.29	.04
2.	I have close friend	58	77	163	6.43	.01
3.	I am confused about my health problems	35	18	164	7.73	.005
4.	Life is not much fun these days	40	28	164	4.03	.04
5.	I am a very disciplined person	38	52	159	3.96	.05
6.	I don’t mind waiting in a line	31	51	116	6.99	.008
7.	I don’t really understand my illness	29	17	160	4.09	.04
8.	I get lots of emotional support	48	67	160	7.08	.008
9.	I know what each of my medicines is supposed to do	60	75	165	4.00	.04
10.	I can keep myself healthy	21	41	160	8.75	.003
11.	I enjoy life most of the time	66	82	165	7.26	.007
12.	My memory is pretty good	59	76	162	7.14	.008
13.	I keep myself in pretty good physical shape	39	58	165	5.68	.02
14.	I tend to be a “liner”	45	32	163	4.43	.04
15.	I have a good understanding of my medical problem	54	77	162	11.75	.002
16.	I always try to plan for the future	55	77	164	10.17	.001
17.	Sometimes you have to take things on faith	66	80	165	4.38	.04

18.	There are not many things I still enjoy	27	14	164	5.50	.02
19.	I don't always know what's best for me	60	49	165	3.88	.05
20.	I read a lot about my medical problems	9	39	166	22.73	.000

* chi-square with Yates Correction

Appendix 2-3: List of self-help materials

(Extracted from: <http://www.mentalhelp.net/psyhelp/biblio/bib2c.htm>, 2003/11/20)

Themes	Book title	Author	Year	Publisher
Stress & anxiety	<i>Mastery of your anxiety and worry</i>	Craske, M. G., Barlow, D. H. & O'Leary, T.	1992	Albany, NY: Center for Stress and Anxiety Disorders
	<i>Mastery of your anxiety and panic</i>	Barlow, D. H. & Craske, M. G.	1989, 1994	Albany, NY: Center for Stress and Anxiety Disorders
	<i>How to stubbornly refuse to make yourself miserable about anything, yes, anything !</i>	Ellis, A.	1988	New York: Carol Publishing
	<i>Rapid relief from emotional distress</i>	Emery, G. & Campbell, J.	1986	New York: Fawcett Columbine.
	<i>Healing mind, healthy woman: Using the mind-body connection to manage stress and take control of your life</i>	Domar, A. D. & Dreber, H.	1996	New York: Henry Holt
	<i>The stress solution</i>	Miller, L. H. & Smith, A. D.	1993	New York: Pocket Books
	<i>Toxic work: How to overcome stress, overload, and burnout and revitalize your career</i>	Reinhold, B. B.	1996	New York: NAL Dutton
	<i>Anxiety management training: A behavior therapy</i>	Suinn, R. M.	1990	New York: Plenum Press
Fear & phobia	<i>Don't be afraid: A program for overcoming your fears and phobias</i>	Rosen, G.	1976	Englewood Cliffs, NJ: Prentice-Hall.
	<i>Women and risk: How to</i>	Marone, N.	1992	New York: St.

	<i>master your fears and do what you never thought you could do</i>			Martin.
	<i>Life without fear: Anxiety and its cure</i>	Wolpe, J. & Wolpe, D.	1988	Oakland, CA: New Harbinger Press
General	<i>The authoritative guide to self-help books</i> <i>(published an evaluative compendium of over 350 self-help books in 33 categories.)</i>	Santrok, Minnett & Campbell	1994	New York: Guilford Press

Appendix 2-4: Rosen's criteria for the review of "do-it-yourself treatment" books

Scores	Guidelines for reviewers
1	What claims exist in the title or contents of the book that define the text as a do-it-yourself treatment program?
2	a: Has the author attempted to convey accurate information regarding empirical support for the program? b: Has the author determined if readers develop accurate expectations?
3	a : Does the book provide a basis of self-diagnosis? b: Have the methods for self-diagnosis been evaluated to establish rates of false positives and false negatives?
4	Have the techniques that are presented in the book received empirical support?
5	Has the book itself been tested for its clinical efficacy and under what conditions of usage have the tests been conducted?
6	In light of the above points, what is the accuracy of any claims made in the title or content of the book?
7	Can comparisons be made between the book under review and other books on the same or related topics?

(As quoted in Rosen, 1981, p.190)

▪A review of selected self-help books

Theme	Book titles	Author/year	Publisher	Criteria met
Depression	<i>Feeling Good: The new mood therapy</i>	Burns, D. 1980	New York: Avon Books	2a,2b,3a,3b,4,5,6,7
Family /Marital	<i>The Dance of Intimacy: A woman's guide to courageous acts of change in key relationships</i>	Lerner, H. 1989	New York: Harper & Row	2a,2b,4
Substance abuse	<i>Codependent No More: How to stop controlling others & start caring for yourself</i>	Beatie, M. 1987	MN: Hazelden Foundation	2a,4
Sexual abuse	<i>The Courage to Heal: A guide for women survivors of childhood sexual abuse</i>	Bass, E. & Davis, L. 1994	New York: Harper Collins	3a

(Extracted from Adams, S. J. and Pitre, N. L., 2000)

Appendix 2-5: Recommendable films for bibliotherapy

	Film/theme/ original book, script	years/director/ performer	Description
1	<p>【A Beautiful Mind】 / what is life, confronting the disease, relationship, gaining love.</p> <p>Based on the book by Sylvia Nasar (1998): <u>A Beautiful Mind: A Biography of John Forbes Nash, Jr.</u> (New York: Simon and Schuster).</p> <p>Written by: Akiva Goldsman</p>	<p>2001 / USA</p> <p>Directed by: Ron Howard ,</p> <p>Cast: Russell Crowe, Jennifer Connelly.</p> <p>Music Composed by: James Horner</p> <ul style="list-style-type: none"> •Winner of the 73rd annual Academy Awards (2001/2): Best Actor- Russell Crowe, BEST SUPPORTING ACTRESS- Jennifer Connelly. •Winner of Broadcast Film Critics Association Awards: BEST PICTURE BEST DIRECTOR BEST ACTOR BEST SUPPORTING ACTRESS. •Winner of Writer's Guild of America Awards: BEST SCREENPLAY. • Winner of the 14th Hollywood BEST SCREENPLAY Award. 	<p>“A BEAUTIFUL MIND” is a heartwarming true story about the struggle of a mathematical genius, John Forbes Nash Jr. (1928~).</p> <p>John Nash won “1994 Nobel Laureate in Economics” for their pioneering analysis of equilibrium in the theory of non-cooperative games. He is a genius but not good at getting along with people, however he found the beautiful and brilliant Alicia Larde who brought him to a concept that he had never seriously considered - love. When he was 30 years old, suffered from serious schizophrenia. John Nash was recovered by Alicia's love. After 30 years of struggle, he triumphed over tragedy and literally changed his world.</p>
2	<p>【Finding Forrester】 / relationship</p>	<p>2000. U.K.</p> <p>Director: Gus Van Sant</p> <p>Cast: Sean Connery,</p>	<p>Jamal Wallace (Robert Brown) is a talented young basketball player who got scholarship and whose secret passion is writing. He came to</p>

	<p>written by Mike Rich</p>	<p>Robert Brown</p> <p>Note : Rated PG-13</p>	<p>a prestigious New York prep school. After an accidental meeting with William Forrester, a reclusive novelist who was a Pulitzer-prize winning author 40 years ago, he became Jamal's mentor. Soon, both men learn lessons from each other about life and the importance of friendship. Jamal befriended, helped along by Forrester, and change the old writer to confront reality. Forrester went back to homeland and wrote to him "You need to know that while I knew so very early that you would realize your dreams, I never imagined I would once again realize my own."</p>
3	<p>【WIT】 / discuss life and death</p> <p>Based on the 1999 Pulitzer Prize-winning play by <u>Margaret Edson: Wit</u>, Published by Faber and Faber 2001.</p>	<p>2001, USA</p> <p>Performer: Emma Thompson Directed by: Mike Nichols</p>	<p>Vivian Bearing is an English professor with a biting wit that educates but also alienates her students. With her teaching and life both rigidly under control, Vivian would never let down her defenses, until the day comes when they are taken down for her. Diagnosed with a devastating cancer, Vivian agrees to undergo a series of therapy that are brutal, extensive and experimental. For eight months her life must take an uncharted course. No longer a teacher, but a subject for others to study. She question herself what is the meaning of life? dignity of life? How to face the death? Finally she find herself.</p>
4	<p>【The Emperor's Club】</p>	<p>2002</p> <p>Director : Michael Hoffman</p>	<p>Kevin Kline as William Hundert, a passionate and principled Classics professor who finds his</p>

<p>Based on the short story "<u>The Palace Thief</u>," by <u>Ethan Canin</u>.</p> <p>Play written by Neil Tolkin.</p>	<p>Cast : Kevin Kline, Emile Hirsch</p>	<p>tightly-controlled world shaken and inexorably altered when a new student, Sedgewick Bell, introspect what is the true nature, social power, honest, and character?</p>
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Searching website:

- HBO: <http://movie.kingnet.com.tw/que.html>
- Oscar: http://www.csie.nctu.edu.tw/~movies/new/oscar_actor_n.html
- <http://www.abeautifulmind.com/>

Appendix 2-6: Websites of selected annotated bibliographies

Literature for children and young adults

www.civiced.org/bibliography_violence.html

Bibliotherapy and children's books

James Madison University, VA

<http://falcon.jmu.edu/~ramseyil/bibliotherapy>

Helping children with books

<http://www.ci.eugene.or.us/Library/staffref/therapy.html>

Children's books on death and dying

Penn State -The College of Agricultural Sciences

http://www.penpages.psu.edu/penpages_reference/28507/285072304.html

Vanderbilt's selected list of bibliographies on sensitive issues

The state university of New Jersey – Rutgers : booklists

<http://scils.rutgers.edu/~kvander>

Carnegie Library of Pittsburgh

<http://151.201.61.20/kids/booknook/index.html>

Web Sites about bibliotherapy

The ALAN Review (Journal)

<http://scholar.lib.vt.edu/ejournals/ALAN>

Bibliotherapy: Max Weber

The City University of New York- Hunter College

http://maxweber.hunter.cuny.edu/pub/eres/EDSPC715_MCINTYRE/Biblio.html

Bibliotherapy: Brigham Young University, Hawaii.

<http://w3.byuh.edu/library/curriculum/Bibiotherapy/bibliotherapy.htm>

Poetry Therapy

<http://www.poetrytherapy.org/index.html>

Appendix 3-1: Romanization Systems for Chinese Terms

Chinese words themselves usually imply meanings and sounds, which are quite different from Latin languages. In order to make Chinese characters internalized, there are two types of phonetic notation transliteration in the alphabetical writing: One is Pinyin, which has been developed since the 1950s; the other is Wade-Giles Romanization. In Pinyin, it seems easier to learn and is accepted greatly by scholars. Wade-Giles Romanization is more complicated than the former; it has been utilized in last decades and still been applied these days. Therefore, both systems will be mentioned in my thesis. Pinyin will be the primary translation for Chinese terms and Wade-Giles will be adopted in brackets. However, most renderings have not been united yet, because there are so many countries forming Chinese society. There are still lots of articles translate by using either of these systems, which makes readers confused. The following is the comparison of these two systems:

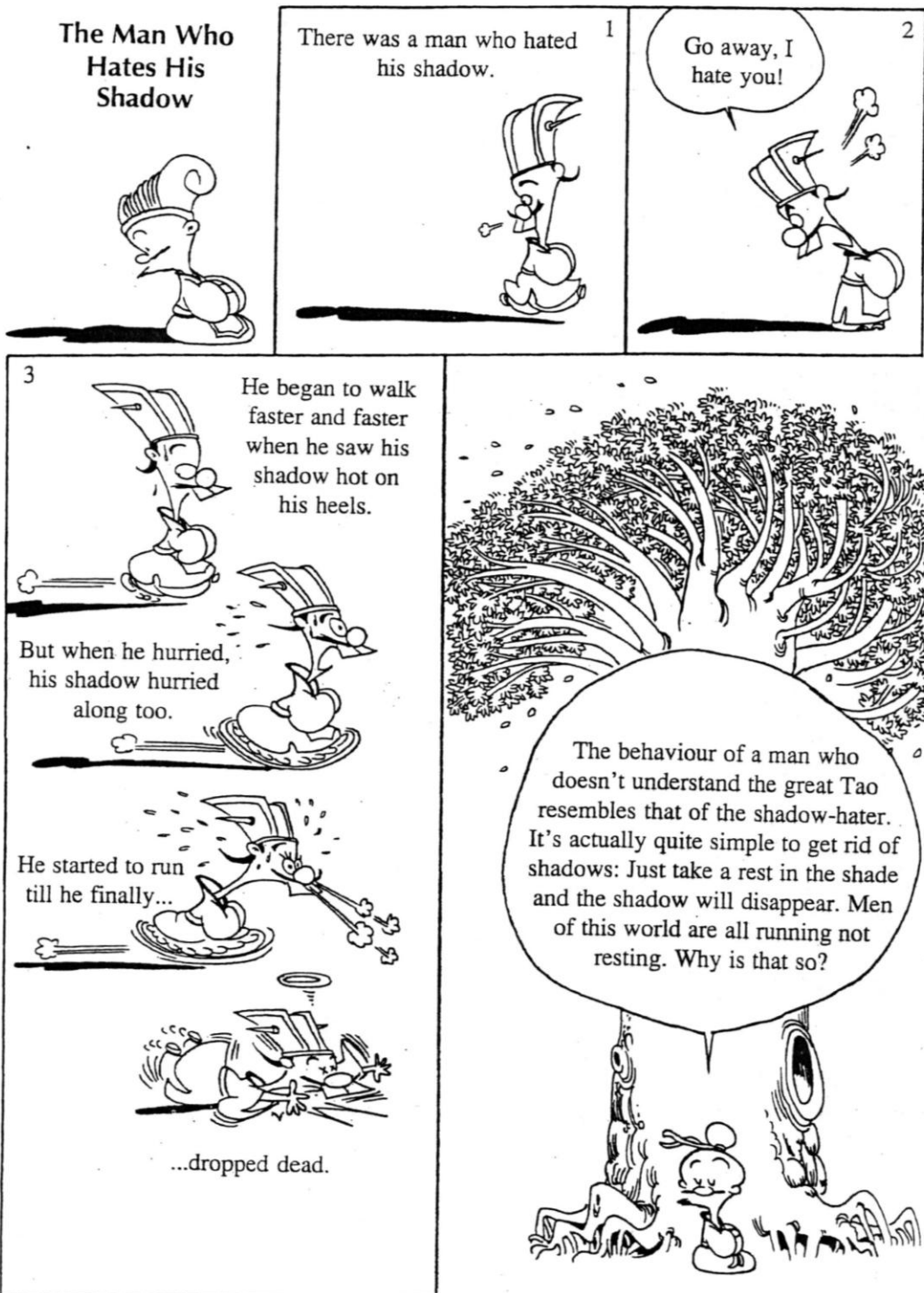
Pinyin Romanization	Wade-Giles Romanization	Pronounce as-	English translation
Dao	Tao		Way, path
de	te		virtue, moral force, power
jing	ching		classic, scripture
junzi	chun-tzu		gentleman, profound person
ren	jen		benevolence, humaneness
Tian	Ten		Heaven, nature
Ziran	tzu-jan		spontaneity, naturalness
b	p	b as in “be”, aspirated	
c	ts'	as in “its”	
ch	ch'	as in “church”	
d	t	d as in “do”	
g	k	g as in “go”	
ian	ien		
j	ch	j as in “jeep”	
k	k'	k as in “kind”,	
ong	ung		
p	p'	p as in “par”, aspirated	
q	ch'	ch as in “cheek”	
r	j	approx like the “j”	

		in French “je”	
s	s, ss, sz	s as in “sister”	
sh	sh	sh as in “shore”	
si	szu		
t	t'	as in top	
x	hs	as in “she” - thinly sounded	
yi	i		
you	yu		
z	ch		
zi	tzu		

From: The Internet encyclopedia of philosophy

<http://www.iep.utm.edu/ancillaries/chinese-terms.htm>

Appendix 3-2: The man who hates his shadow (Tsai, 1999)



Appendix 3-3: The selection of Zhuang Zi's fables in 12-session

bibliotherapy

Week 1: Introduction & pre-test

First, I introduced the purposes of the group, and the procedure to be followed, the background of Zhuang Zi and the main concepts of his book. Then, students shared their expectations of attending this programme. Most students had studied only 1~2 famous fables at high school, such as “The butcher slaughters the cattle”. However, most of them had focused on translating the ancient wording of such fables into the Chinese vernacular to pass examinations, but this does not seem to have had any influence on their real life. Thus, this bibliotherapy programmes designed to convert their study and explore deeply the contents of these fables.

Before bibliotherapy, students were given the pre-test of the “Philosophical Belief and Stress Coping Inventory, PBSCI”, and the “Stress level inventory”, and their demographical information was collected. PBSCI includes three subscales of Zhuang Zi's concepts: discarding prejudice, removing greed, and forgoing demands. According to the above three main concepts of Zhuang Zi's fables, several fables were selected, relevant to coping with stress, and divided into 12 sessions as shown in following weekly discussions:

【Unit A: Discarding Prejudice】

Week 2: The old man who makes wheels (ch. 13)

One day, Duke Huan of Qi was reading in the hall. Meanwhile, wheel-maker Bian was making wooden wheels in the courtyard. He entered the hall and curiously asked the duke, “May I know what book are you reading?” The duke answered, “The masterpiece of a sage.” Then Bian asked again, “Is the sage still alive?” The duke replied, “Yes.” Bian said, “What you are reading is but dross.” The duke angrily shouted, “Why did you say that? I’ll order your death if your reasons can’t persuade me.” Bian said, “Can I give an example of my work as an allegory to explain my viewpoint? If I shape the wheel fast with the chisel, I save on effort but the wheel is not round. On the contrary, if I slow down I need to use more effort in total but the wheel is round. The best way is not to be fast or slow, but to operate with just the right degree of exertion. This is the reason why I have not been able to completely pass my skill on to my son and I’m still making wheels in my 70s. Likewise, the sage’s wisdom can’t be completely passed down to us. You still need to experience it for yourself. So the book you are reading is just like dross.” The artisan can only tell us the foundation of skills, but you must practice and experience them for yourself, because some knowledge can’t be expressed completely in words.

Zhuang Zi said that the great Dao is hard to define by name, and even

harder to describe in words. One must experience to learn from doing (Zhuang Zi, ch.2). Zhuang Zi also thought that one can forget the meaning of words when catching the meaning of context (Zhuang Zi, ch.17). He did not deny the value of studying classical sages' works. Instead, he advised people to grasp their true implications and quickly apply them to knowledge in life, but not rigidly adhere to the words or be inflexible.

【Question in class discussion】 **Q:** How does knowledge become wisdom?

【Students' answers】 **A:**

- Knowledge is alive, not absolute fixed, revised by time, and continuously accumulated to become “wisdom”. Thus, don't be stubborn and hold fast to your view without adapting.
- Apply knowledge to real life and to help in problem-solving.
- Integrate theory and skills, accumulate one's experiences.
- Skill comes from practice.
- Knowledge needs to be reflected on and be used at the right time, in the right place, with the right people. That is called “wisdom”.
- Knowledge is not an achievement to show off or gain honour.
- Knowledge is an instrument that can be good or wicked, depending upon how it is utilized by people. However, wisdom is an ability to create a good life.

- How can one evaluate one's wisdom? It depends upon how one manages one's life.
- Wisdom is the process of digesting knowledge and experiences.
- Wisdom is decision-making, analysis and drawing inferences.
- By accumulating knowledge people only become experts; but by gaining insight from life they can become wise men.

【Teacher's conclusion】

Knowledge and techniques can be taught, but wisdom cannot be taught directly; it needs self-reflection and insight. Generally speaking, people may think that the content of books is valuable. However, the meaning behind the books, which is insight gained gradually by readers, would be much more valuable. Wisdom internalizes knowledge into our daily life, creates our own thoughts, and becomes applied knowledge and a philosophy of life.

Week 3 : Is Xi Shi a beauty? (ch. 2)

One day, Nie Qye asked Wang Ni, "Do you know if there is a universal standard for judging knowledge?" Wang Ni said, "No! Listen! If a man slept in a wet place he would get arthritis, but would a mudfish have this disease? When a man climbs up a tall tree, he would have a fear of heights, but would a monkey? Humans live on earth; mudfish live in wet places; monkeys live in trees. Which one is the best habitat?" Nie Qye replied, "You are right!

Standards differ from one group to another.” Wang Ni also said, “Man likes to eat meat; deer likes to eat grass; centipedes like to eat snakes; and crows like to eat rats. Which of the above is the most delicious food in the world? Also, Xi Shi is the most beautiful girl that men love to pursue; however, fish do not think her beautiful, and they dive down to the bottom of the sea; birds do not appreciate her either, and they fly away; and the deer does not like her and runs away. So which one knows who is the real beauty?” The standards made by man are not absolute standards. If we mistake the relative for the absolute, then we are far away from the truth. Thus, we should discard our persistence, and keep an open mind. After illustrating this fable, the students’ discussions were as follows:

Q: Is there any absolute standard for social values?

A:

- Yes, there must be a justice and absolute law in the society for everybody to follow, otherwise, this world would be chaotic and full of criminals.
- No, different people have different views.
- No, we still can have lawyers to argue and plead from different perspectives or appeal to a higher court, even if the judge declares someone guilty.
- Values are man-made and can be variously interpreted. People can have different thinking that translates into different values.

- There is no absolute best. Everyone has his/her own existing value from being born. You should not let the situation restrict you, but try to be your true self and walk in your own way.

Q: How can we deal with people with different viewpoints, especially in a society where multiple values prevail?

A:

- Respect everybody's opinion instead of pushing others out of the group.
- Don't indulge in sophistry. Just do it and prove it so that people see the results and trust you.
- Old Chinese saying: If the mountain cannot be moved, then change the route of road; if a road cannot be changed, then people should make a detour. Keep life flexible, and avoid stubbornness.
- The only thing we can do is find out our advantages and unique ability. Try to understand, control and manage ourselves well, then we can help others.
- Peace is important, don't have conflict and quarrelling in the dialogue.
- We still need the abilities of critique, reflection, and practice in this multiple value society.
- Exercise friendly tolerance, try to communicate with others, and switch position to empathize with others.

Most students thought that values are not absolute and need to be flexible.

One shouldn't be prejudiced by first impressions. We should cultivate magnanimity to accept others' opinions, which could make up our deficiencies. Regard oneself as a cup of water that is two thirds full, and never be full up; always leave space to allow new things to get in. Moreover, experts' opinions are not perfect, people need to learn by experience and find out what suits them.

Week 4 : The arrogance of the little sparrow (ch. 1)

One day, a little sparrow was talking to a huge bird, a roc, and laughed at that bird, saying, "Why do you fly so high? You soar miles into the air, straight up then go forth. You seem to be not as smart as me, and waste so much energy. You should be like me to save energy and enjoy flying. I fly around the reeds, I only need to rise a few yards in the air, then I settle down again, I fly freely and with ease. The smartest way is to copy me. You spend so much efforts and energy just to get up high. Why do you do that? Where are you going?"

The arrogant sparrow did not know why the huge bird flew so high. The huge bird did so because it needed the wind to rise and glide, then it started its journey to the southern sea, crossing thousands of miles. In conclusion, this sparrow could not imagine the other bird's broad world and laughed at it. In fact, the little sparrow was ignorant. We need to discard our bias, not criticize or compare with others, because of our limited knowledge and views. This is

the difference between a big and small vision.

Q: What causes peoples' arrogance?

A:

- Ignorance, being less knowledgeable. Small scope
- Stubborn character
- Living in their own world, being self-centred.
- People get rich, possess power or financial strength so they tend to self-inflation, become careerists, or consider everyone beneath their notice.
- People try to be superior in order to cover up their inferiority, as they are afraid of being denigrated.
- Showing off to impress others and win praise; out of vanity.
- Highly educated but not very cultured.
- Some people think that what they think is absolute right, so they do whatever they want.
- Overestimating one's ability and despising others'.
- A shallow view of life.

People who have humility tend to create more opportunities to learn new things and revise improper behaviour than arrogant people. Confidence is a good attitude but be careful that it doesn't become excessive, as that would become pretentiousness. A balanced life is the best attitude.

【Unit B: Removing Greed】

Week 5: **The shepherd lost his sheep** (ch. 8)

Zhang and Gu grazed their sheep together. Zhang concentrated too much on his reading and lost his sheep. Gu gambled with friends under a tree while the sheep went astray. Although the causes were different, the results were the same. In this world, the intellectual loses his life in pursuit of fame; the petty-minded individual loses his life in pursuit of huge profits; the official sacrifices his life to save the state; the sage loses his life to preserve the world. Their reasons are different, but they all lose their lives. No matter what the reasons, sacrificing their lives goes against the natural way and is a great mistake.

☐: What are the differences between pursuit of fame/fortune and fulfilling one's dreams?

☐:

- Fame and fortune are kinds of greediness that make people indulge in endless desires at the expense of morality.
- Fame and fortune would make people become confused or lose themselves.
- One's dreams originate from one's mind, they are natural callings from the heart. However, pursuit of fame and fortune may have some purposes, e.g., to control the external world, prove one's power, receive some benefits, or

satisfy vanity.

- Once people become celebrities, they lose their freedom and privacy. For example, the paparazzi love to pursue them.

According to society's values, people are expected to learn how to work effectively and gain praise. However, it would be dangerous if one's self-identity were built up on other's expectations, because when others' praise decreases, that would cause one anxiety.

Week 6 : The great archer (ch. 21)

Lie Zi was showing off his archery to Bohun Wuren. With a full cup of water balanced on his elbow, he shot speedily and continuously. As one arrow was discharged, another was put in its place, the next was ready on the string. While Lie Zi shot he stood like a statue without spilling a drop of water. However, Bohun Wuren led him to the steep cliff and said, "Can you shoot with composure here ?" Lie Zi trembled and said that he was unable to shoot at all.

If he had not been distracted his surroundings he would have been a great archer. To shoot with deliberation is only a good technique, but to shoot without thinking of shooting is the way of "Dao". If one can reach this stage where there is no self, no arrow, no winning, no losing, and just concentrate on oneness with Dao, then that is the essence of archery.

Q: How can one overcome one's fear?

A:

- Set the desire for triumph aside, and do not be influenced by the external environment.
- Do not care too much about winning or losing.
- Have good relationships with others and a balanced life.
- Devote oneself to others without expecting something in return.
- People worry when confronting uncertain situations.
- Forget one's own benefits.
- Someone will be full of fear if he/she has negative thinking unconsciously.
- It is hard to show your real ability if you worry. So you need to build confidence first and believe in yourself.
- Do not think too much, because worry is created by oneself, so just do it.
- Act according to your conscience.
- You need to have courage to accept whatever the outcome may be, even defeat.

Week 7 : The pheasant in the cage (ch. 3)

The wild pheasant takes a long time to find worms and takes a longer time to find water. However, it doesn't like to be shut in the cage, even though it's given abundant meals which make its feathers bright. It doesn't want to lose its

freedom but enjoys the open. People who understand how to live will not trade their freedom for material pleasure. However, how many people can do this in real life?

In order to be free it is necessary to give up something, e.g., fame and wealth. The metaphor of this fable is just like that of Aesop's fable, "The Town Mouse and the Country Mouse". It is hard to possess both material satisfaction and spiritual freedom simultaneously.

Q: What is the importance of spiritual enjoyment?

A:

- If people lose their soul they would become just like a puppet or robot.
- Being without freedom is rather like death. Life without freedom is more painful than death.
- Give me liberty or give me death (Patrick Henry, 1736-1799).
- Human history would become a beastly process if people's souls are deprived.

Q: Is high achievement what creates a meaningful life?

A:

- Certainly not. People devoted to benefiting mankind without being noticed are also meaningful.
- High achievement cannot make people happy if these achievements are not

what they really want or need.

- You will be really happy only if you do something to suit yourself.
- If you cannot be true to yourself, then your life would be blind and unreal.
- It would lead to regret if people have high achievement based on immorality.

High achievement is only an accompaniment; real happiness must come from one's mind which conforms to one's conscience and goodness. This would create a meaningful life.

【Unit C: Forgoing Demands】

Week 8 : Death of a show-off monkey (ch. 24)

One day, the king of Wu country went hunting monkeys in the mountains. All the monkeys saw his hunting party and scampered off in terror, except one monkey which flaunted its agility and swung among the trees while they were shooting. The king missed several times and angrily asked his people to shoot at it together. This monkey was very agile and enjoyed displaying its strength. In sum, we should not flaunt our ability as by doing so we would usually invite disaster. Instead, we had better hide our light and try to be humble and modest.

Q: Is it hypocritical for a great wise man to appear to be slow-witted?

A:

- No, you should tone down or hide your merits if the situation is not appropriate.

- The proverb says “Still water runs deep”
- Really knowledgeable people feel their inadequacy, and littleness; they realize they still have much to learn, so would not be complacent
- Be natural, do not be a show off, so hide your merit.
- The point of using knowledge is not used to win others’ praise, but to increase one’s ability to solve problems.
- Humbleness is a kind of virtue.
- Attracting too much attention brings the trouble through envy, so veiling one’s merits and distinction is not pretence, but it’s a means of self protection.
- The attitude of low key is humble, but not hypocritical. However, for people to pretend to know nothing, but tease others behind their backs is really hypocritical.
- Do not show off one’s genius, all the time, but reveal it when it is needed or at the proper time when its importance would be obvious.

In conclusion, all the discussion seems similar. The students were probably influenced by the fable, or they lacked good independent thinking training previously.

Week 9 : On clouds of Dao (ch. 20)

One day, Zhuang Zi and his disciples were hiking along a mountain path.

On the way, they saw a few huge old trees. They asked, “Why doesn’t the lumberman cut them?” Zhuang Zi said that the trees escaped being felled because they were useless. When they got to the bottom of the hill, he dropped in on his friend who was very hospitable. The master ordered the servant to slaughter a goose for dinner. The servant said, “We have two geese, one cackles and the other doesn’t. Which one should I slaughter?” The master answered, “Slaughter the one that doesn’t.” On the way home, Zhuang Zi’s disciples asked him, “We don’t understand, why is the defective tree safe, but the defective goose was killed? How should we position ourselves in this society?” Zhuang Zi replied, “Usefulness and uselessness are relative concepts. A man with wisdom would look beyond these relative criteria and take a natural, flexible approach, depending on the situation.” It is best to keep one’s wits and act according to changing circumstances, and disregard worldly usefulness and uselessness. By riding on the clouds of the natural Dao, we can be free from troubles.

Q: How can you reach a solution if things are stuck?

A:

- Revise your thinking from different angles.
- Create turning points
- Keep life flexible.

- Before you can create new chances, you need to know yourself first.
- Everything has two sides.

Continue to have hope, Heaven will always leave a door open.

Week 10: There is virtue among thieves (ch. 10)

A long time ago, there was a well-known thief named “Dao Zhi”. One of the thieves asked, “Do thieves need to practise virtue?” Dao Zi replied definitely that the great leader of thieves must practise the following five virtues. First, a ring-leader can foretell where valuable things are hidden, which is called “wisdom”. Secondly, he must lead the way in house-breaking, which is called “courage”. Thirdly, when the stealing is done, he is the last to leave the scene; that is called “camaraderie”. Fourth, he can weigh the situation carefully before taking action, which is called “wit”. Fifth, he divides the stolen goods and money evenly among the thieves, which is called “benevolence”. A good man can’t become a great man if he has not practised the virtues of the sage. Similarly, the wicked usually employ the sage’s virtues as an amulet and to become great leaders of wicked man. They may not succeed in becoming villains without borrowing these virtues, that is, the wicked man cannot become greatly wicked if he hasn’t acquired the wisdom of a sage. However, there are more wicked men than good men in this world. So sages’ words do more harm than good to people. Therefore, man-made ethics are not the

primary foundation of virtue. Rather, people must return to their original purity, simplicity and follow the natural principle (Dao).

Q: What is hypocrisy?

A:

- That means doing righteous things on the surface but counting on one's profits in your mind. E.g., helping someone with money, then cheating them to do illegal things.
- People with deep craftiness.
- Those who are concerned with profits, and like to exploit others.
- There are big differences between speaking out and acting out.
- People put on a show of noble rhetoric for the country, but in secret they act based on their greed.
- Being selfish but pretending to be selfless.
- Speaking and waving the banner of benevolence and righteousness, but acting in opposite way.

Q: How can we keep our mind pure?

A:

- Return to original purity and simplicity, rediscover one's true self, and live a simple life.
- Treat others honestly and sincerely.

- Be honest towards others.
- Behave according to one's conscience.
- Avoid cunning, greed, and evil ideas.
- Reflect on oneself constantly.

Week 11 : The butcher slaughters cattle (ch. 3)

Once upon a time, there was a renowned butcher whose name was Pao Ding. He slaughtered cattle for King Wen-Hui. He was so skilful in his butchery that he could use his extremely thin knife to get into the joints of cattle bones had and still have space to allow the knife to turn freely. The sound made by his knife among the joints of bones the same rhythm as the ancient mulberry-bush dance. The king was amazed that he could reach such a high level of skill. However, the butcher said that the way he cut up the carcasses slaughtered cattle did not depend on “skills” but depended on “Dao” which meant working with his mind instead of seeing only with his eyes.

In this fable, the cattle symbolize the obstacles in life. The knife stands for life. Using the knife sparingly is a metaphor for cherishing one's life. There are three ways of using a knife in this fable as follows:

1. Ordinary butchers: They only see the appearance of cattle; they split and chop even damage both the bones and their knives. They are so pigheaded that they confront the tough with toughness, go ahead without carefully

considering the consequences, Thus, their knives need to be sharpened once a month. Similarly, pushing one's way through life by shoving and bumping tends to impair one's health of body and spirit, and could result in dying young. If someone gets the right method and a key to the problem, that thing can be done easily, just like pushing the boat along with the current, and could yield twice the result with half the effort.

2. Skilled butchers: They understand the skeleton of the cattle and split the carcass with reference to this structure so that their knives can keep sharp for as long as a year. Although they avoid chopping bones, they do not strictly follow the natural structure of the tissue to cut between vacant spaces, and so damage the cattle's tendons. They would still be weary in their body and spirit and find it hard to have a long healthy life.
3. Best Butcher: just like the leading character, Pao Ding, in this fable, who used his knife for 19 years and it was as sharp as new, because Pao Ding conformed to the structure of the cattle, and used his thin knife to dissect so skillfully between areas that he still had a lot space to spare. In the beginning, he saw nothing but the cattle's external appearances. But three years later, he had slaughtered thousands of cattle and learned to think about the cattle's skeleton and could dissect the carcass easily. He avoided all the bones and tendons. That symbolizes finding a way through life when

confronted with unconquerable tasks, which is conducive to keeping in good health.

After learning about Pao Ding's way of slaughtering cattle, the King understood the ideal way of nourishing life. The complexities of the human world resemble the organic structure of cattle. The best way of living is to follow the natural way, a less contrived strategy. For example, people always rush about in pursuit of endless desires and be exhausted in vain if they do not understand the principle of life.

Pao Ding conformed to the path of natural tissues to advance his skills into the state of Dao. This metaphor shows us that people can handle a difficult task with great ease if they realize the course of things' development and the manifestation of the way of Nature.

Q: What is the principle of life?

A:

- Apply wisdom and accumulated experience to life.
- Follow the rules of nature.
- Keep calm, and think things over before you act.
- Don't seek to be in the limelight
- Think flexibly and be prepared to revise your ideas.
- Increase your ability to protect yourself and deal with crises.

- Darwin: survival of the fittest, otherwise we would be eliminated by the competition.
- Preserving and nourishing the health of our body and spirit.

Week 12: Conclusion & post-test

Students were invited to share their feelings about the past 12 weeks and what they had learned. Most students expressed that before this group, they just knew some of the main ideas of Daoism, had little background information on Lao Zi and Zhuang Zi, and were not interested in such themes, as they seemed passive compared to the main values of modern society. However, they were surprised to find that the metaphors of these fables are profound, stimulate people's deep thought, and make people think about the side effects of excessively pursuing success or losing due to the temptations of fame and fortune. Especially in today's challenging society, they provide an alternative way of thinking to protect our health, purify our minds, and set ourselves at ease and free. Now we can really realize the inner meaning of the old saying, "Happy is he who is content".

After the 12-week bibliotherapy, the same tests as in the pre-test were administered again in order to identify the influence of the bibliotherapy. Moreover, the standard test "Interpersonal Behaviour Survey, IBS" was added to help assess the effectiveness of bibliotherapy.

Appendix 3-4: The contents of Zhuang Zi's fables

(Revised from Tsai, 1986, 1993, 1999, 2003; Luo, 1999)

1. Fishes without water (ch. 6)
2. Can a man have no passions? (ch. 5)
3. Yan Hui's fasting of mind (ch. 4)
4. Lie Zi moved by the wind (ch. 1)
5. The famous wizard dare not tell someone's fortune again (ch. 7)
6. The large gourds of Hui Shi (ch. 1)
7. The useless ailanthus tree (ch. 1)
8. A deformed man with virtue(ch. 5)
9. The death of Hun Dun (ch. 7)
10. The sea-bird doesn't like music (ch. 18)
11. Vassals as robbers (ch. 10)
12. Zhuang Zi's wife died (ch. 18)

1. Fishes without water (ch. 6)

When the spring which feeds the lake dries up, the fishes get dehydrated. On the dry land, they smear each other with slime in order keep their bodies wet and stay alive. Although they show their love and mutual help, how long can these considerate fishes survive? It would better if the lake were full so it

did not need the fishes to take drastic action to save one another. Human love is limited, but Nature's love has no limits, so people had better learn from its example of love. Fishes live in the lake, and both are in harmony, with no separate identity.

2. Can a man have no passion? (ch. 5)

One day, Hui Zi said to Zhuang Zi, "Can a man have no passion?" Zhuang Zi replied, "Yes". Hui Zi argued, "How can you believe we should have no passion?" Zhuang Zi said, "It is right for a man to possess emotions. However, it is not good to have passions and become addictive. There should always be a balance; do not like or dislike something too much. If a passion hurts your nature, disturbs your mind, dominates or exhausts you, then this passion should be avoided, as it is unhealthy for both body and mind.

3. Yan Hui's fasting of mind (ch. 4)

The king of Wei country was despotic, so Yan Hui wanted to visit him, and asked Confucius for some advice before leaving. Confucius replied, "It will be hard to persuade him if you act based on your subjectivity, and you had better fast before you go." Yan Hui said, "I am poor, so I don't drink wine and eat meat for a few months, is that ok?" Confucius answered, "I mean fasting of your mind, not fasting for sacrificial ceremonies. First let your mind be still so that no thoughts arise, then listen with your mind instead of your ears, then

even better, listen with your Qi 【i.e. vital energy】instead of your mind because ears can only hear, the mind can only think, but Qi is formless, empty, receptive to all things. By realizing and understanding this, we can become closer to Dao 【i.e. the rules of nature】 .

Later on, Yan Hui talked to Confucius. “Before your preaching, I felt conscious of my existence. After your preaching, it seems I do not exist, as a result of purifying my mind and ridding it of my subjectivity. Am I reaching the state of emptiness?” Confucius said, “Yes, you will be safe to enter Wei country without subjectivity and not for pursuit of fame or fortune. You can give advice if the king will listen to you; if not, stop your advice.” Dao dwells in emptiness and is alive in everything. Emptiness is the fasting of mind (Chen, 1998). Avoiding making yourself the target of attack. It is easy to act purposely, but it is difficult to act without subjectivity and adapt to changing circumstances. This is close to Dao.

4. Lie Zi moved by the wind (ch. 1)

Lie Zi was a very enviable legendary character, who could be glided quickly by a wind, without any effort on his part. He had attained a degree of happiness that was rare and greatly enviable. However, these winds could afford him only a half month of movement. Lie Zi was not really free, because his special power of movement was dependent upon and provided by the wind.

He did not have true freedom and independence because of this reliance.

5. The famous wizard dare not tell someone's fortune again (ch. 7)

In the ancient country of Zheng, there was a famous wizard named Ji-Xian who could predict everything exactly, like a god. Thus, people were very afraid of him, in case they heard of some terrible misfortune. One day, Lie Zi told his teacher Hu Zi about the magic of the wizard Ji Xian. Hu Zi replied, “You must have a desire to excel and reveal something weighing on your mind, so he can take the opportunity to pry about you from the clues you give. You can invite him to tell my future, in order to prove what I surmise”. The next day, Lie Zi brought this wizard to tell the future. After the fortune telling, he told Lie Zi, “Your teacher is very sick and he will die within two days.” Lie Zi was very sad and cried. But his teacher told to him not cry and said, “I just pretend that I was very sick and shut off all my energy. You can invite him to come tomorrow.” The wizard came again, and told Lie Zi, “You are so lucky to meet me, your teacher seems to be better and have vitality.” After the wizard had gone, Hu Zi told his disciple, “I activated my energies from toe to head.” On the third day, the wizard came again. However, he could not identify the teacher's condition, as his energy was changeable, and he asked Lie Zi to call him when his teacher felt stable.

A few days later, the wizard came to see the teacher and ran away

suddenly. His teacher asked Lie Zi to bring the wizard back, but he ran too fast for him to catch up. Finally, Hu Zi told Lie Zi the reason why the wizard was so scared; because he let the wizard see him vacuous, unfathomable, and enigmatic.

Lie Zi eventually realized that mind is the real master of our body. How to control oneself and cultivate one's mind is a task in life. A person's effort or craftiness can be disclosed or be utilized by others. Only people with virtue can not be influenced by external circumstances.

6. The large gourds of Hui Shi (ch. 1)

King Wei gave Hui Shi some seeds of the large gourd. He planted them so that they grew big enough to hold five hectolitres. "But the quality of these gourds is so poor," he said, "that when filled with water, they broke the minute I held them up. And when split in half, they are too shallow and hold only a little water. So I break them because they are too big to be any use." However, Zhuang Zi thought Hui Shi did not know how to use something large. Usefulness and uselessness are relative qualities. When something is stuck, people can adopt alternative thinking to create other possibilities. The gourd is so big that we can make a net to wrap it up, then tie it round your waist and float in the water like a swimming ring. Why must water be carried inside the gourd, It can be carried outside it too. Such a way of things is best described as

“deriving usage out of uselessness.”

7. The useless ailanthus tree (ch. 1)

One day, Hui Zi said to Zhuang Zi, “I saw a huge tree by the side of the road, called an ailanthus. Its trunk is irregular and gnarled and its branches are twisted so that it cannot be used to make furniture. It stands by the roadside, but no carpenter looks at it. Your words are just like this tree, big but useless; no one will listen to you.” Zhuang Zi said, “You seem so worried about this, why don't you move it to the fields where people can sit idly by its side, and lie down in blissful repose beneath the shade. Since this tree is useless, no one will come to chop it down.”

Although many things may appear useless, they still have some usefulness. This tree is free from injury because of its uselessness, but for the tree itself, usage of uselessness is a great advantage.

8. A deformed man with virtue (ch. 5)

There was a lame, deformed hunchbacked man with a harelip. He visited Duke Ling of Wei. After their conversation, the Duke greatly respected that hunchbacked man for his virtues and intellect and they became friends and talked frequently. From that time, the Duke saw normal, well-formed men, and thought their appearance unusual. Moreover, a jar seller who had a big tumor on his neck visited Duke Huan of Chi. The jar seller and the Duke became

deeply involved in their conversation. After that, the Duke greatly respected and liked this jar seller for his virtues and talent. Later, the Duke saw normal men and thought their necks to be too thin. In both cases, these men's physical appearance was abnormal but they possessed virtues. Zhuang Zi hinted that most people always emphasize such things as a defective appearance, but do not emphasize things which are most important, such as one's virtues. Actually, people can forget the imperfect features but can't forget one's inner virtues. This shows what a mistake it is to forget the real essential things in life.

9. The death of Hun Dun (ch. 7)

According to legend, the god of the southern sea is called "Shu", the god of the northern sea is called "Hu" and the god of the middle sea is called "Hun Dun" (i.e., Chaos). Shu and Hu frequently met each other at the middle sea, and Hun-Dun welcomed them enthusiastically. Therefore, Shu and Hu wanted to thank him for his hospitality by giving him a gift. They had the idea that as humans had seven apertures on their faces which could see, hear, eat, and breathe, Hun Dun should have these as well, since he did not have these apertures. So they decided to make them for him; they wanted Hun Dun to experience another kind of happiness. Shu and Hu dug holes out of Hun Dun's blank face, one aperture every day. They finished seven apertures in seven days, but then Hun-Dun died. This fable illustrates that going against the law of

nature causes destruction.

10. The sea-bird doesn't like music (ch. 18)

Yuan Ju was a huge sea-bird with beautiful plumage, that looked like a phoenix. The huge sea-bird landed in the suburb. The Duke of Lu asked someone to bring it to the imperial ancestral temple. The Duke treated it with respect. For example, he had the best music of the state played by the palace orchestra, and fed it with the best quality wine and meat available in the state. However, this sea-bird refused to eat and drink and died three days later. We can't treat birds by man's standards, but only by birds' standards. People should feed birds with what birds desire, not what we desire. Imposing our preferences on others often causes harm.

11. Vassals as robbers (ch. 10)

If there was no water then the river would dry up; if hills collapsed then the valley would fill and level up; if law were no longer necessary between people, then society would be peaceful without robbers.

In general, people worship sages, but wicked men achieve their goals by borrowing sages' words to appeal to the masses. However, this resulted in providing great opportunities for the famous robber named "Dao Zhi". People invented the measuring cup and scales to maintain fairness in trading, but the robber stole them and used them to do bad things; people made stamps to

represent credit, but the robber stole them and applied them to do bad things.

Stealing a person's property is criminal and punishable by death. However, by stealing a country, such a robber can change into a vassal and gain huge benefits. Such a great temptation is hard to resist. Zhuang Zi did not reject the sages' words, but condemned the way wicked people make use of sages' words to rationalize their deception.

12. Zhuang Zi's wife died (ch. 18)

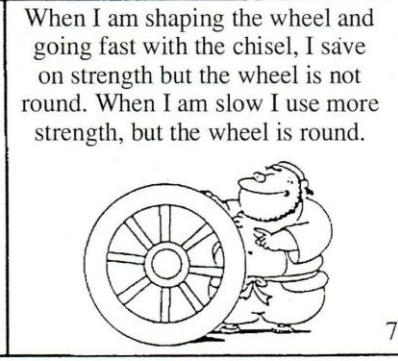
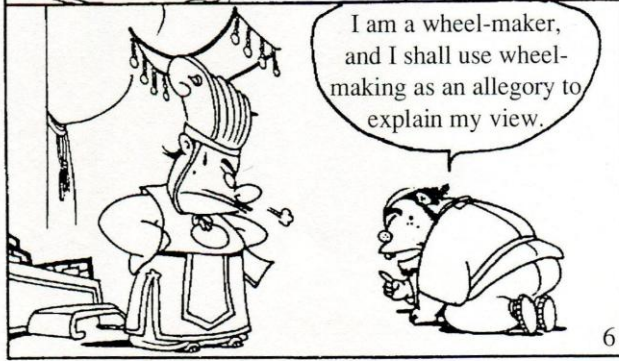
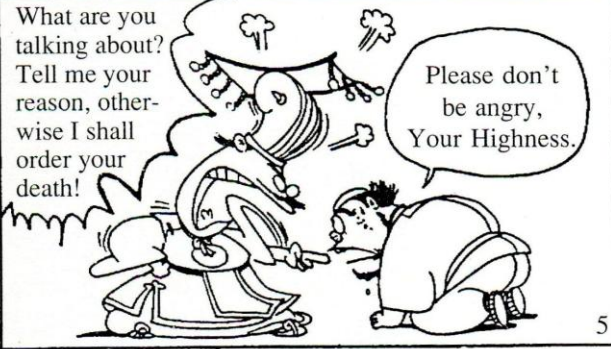
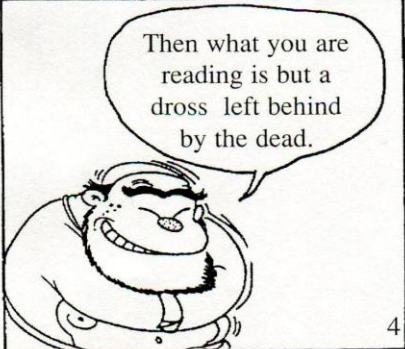
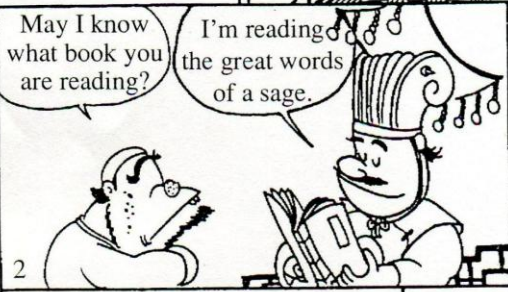
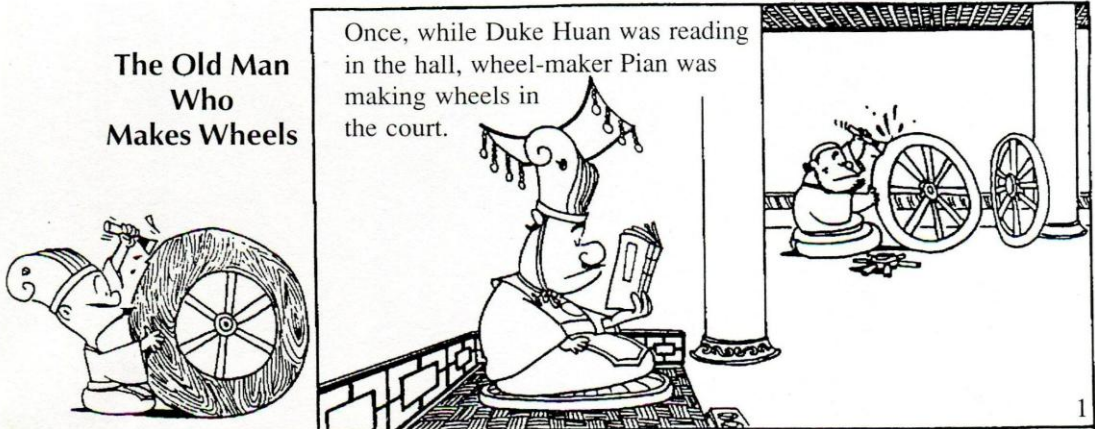
Zhuang Zi's wife died. Hui Zi went to offer his condolences and saw Zhuang Zi drumming a tune on a tile and singing a song. Hui Zi was angry and said, "How come your wife who took care of your household, has just died, but you drum a tune and sing without sorrow?"

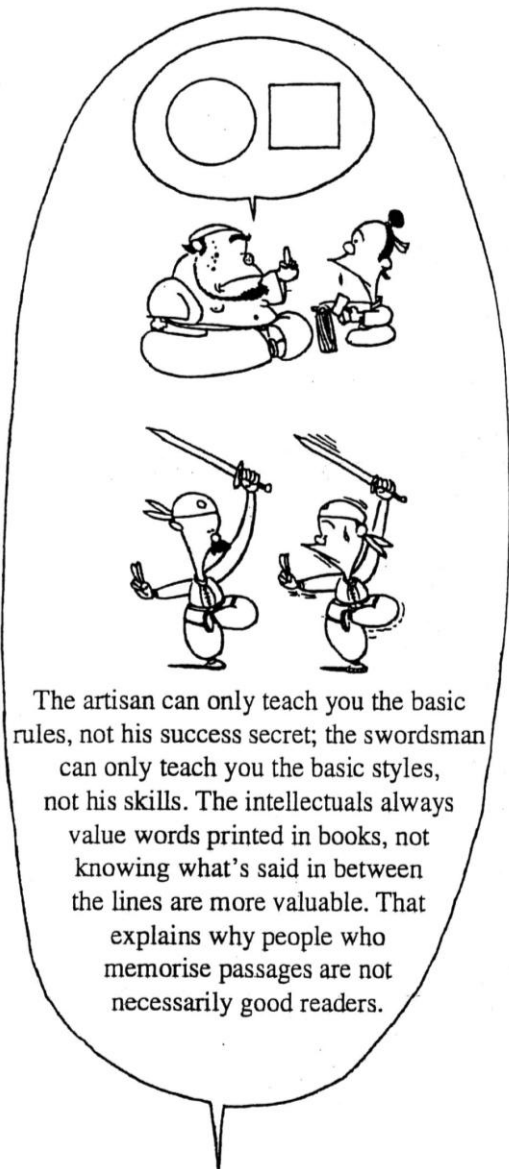
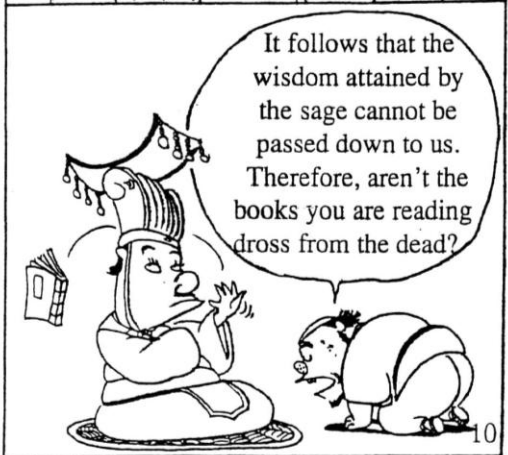
Zhuang Zi replied, "I was sad and couldn't help it when I heard she had died. But later I thought that people have no physical form and vital energy at the beginning. Then they are transformed and born to life; that is the natural process. Now another natural transformation is to die, just like the rotation of seasons. She is resting in Nature's realm now. If I continued to sob and wail, I would just be behaving like one ignorant of Nature's process. So I've stopped crying. Birth and death are Nature's process."

■Appendix 3-5: The old man who makes wheels (Tsai, 1999)

The Old Man Who Makes Wheels

Once, while Duke Huan was reading in the hall, wheel-maker Pian was making wheels in the court.





▪Appendix 3-6: On clouds of Tao (Tsai, 1999)

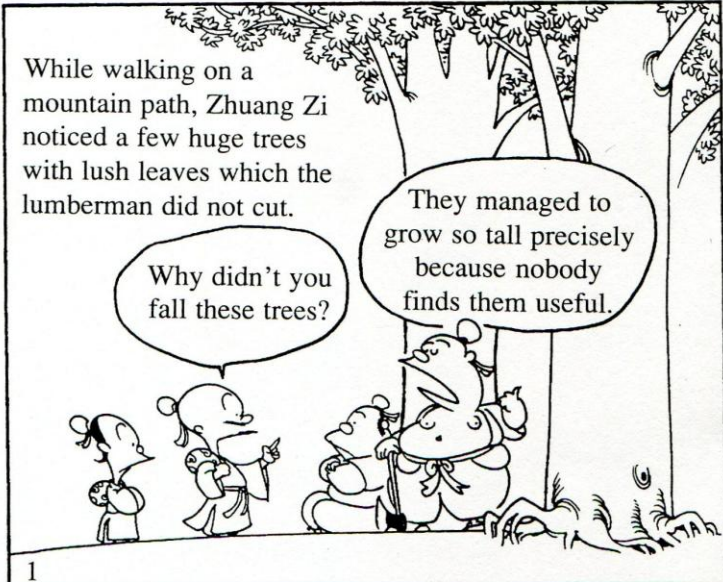
On Clouds of Tao



While walking on a mountain path, Zhuang Zi noticed a few huge trees with lush leaves which the lumberman did not cut.

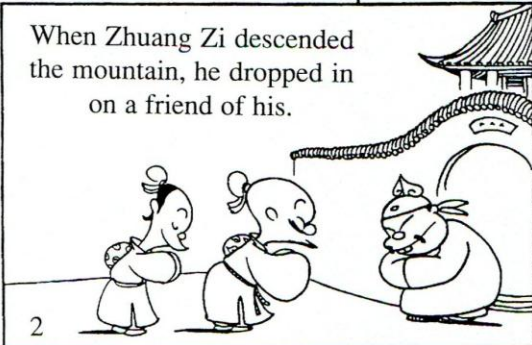
Why didn't you fall these trees?

They managed to grow so tall precisely because nobody finds them useful.



1

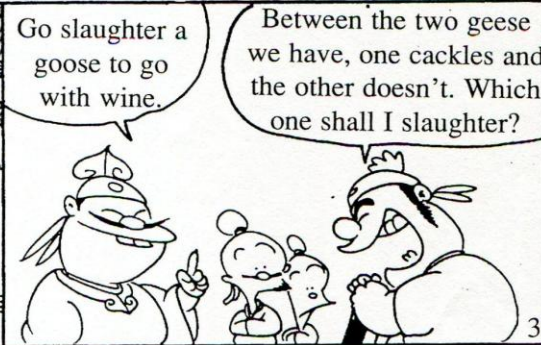
When Zhuang Zi descended the mountain, he dropped in on a friend of his.



2

Go slaughter a goose to go with wine.

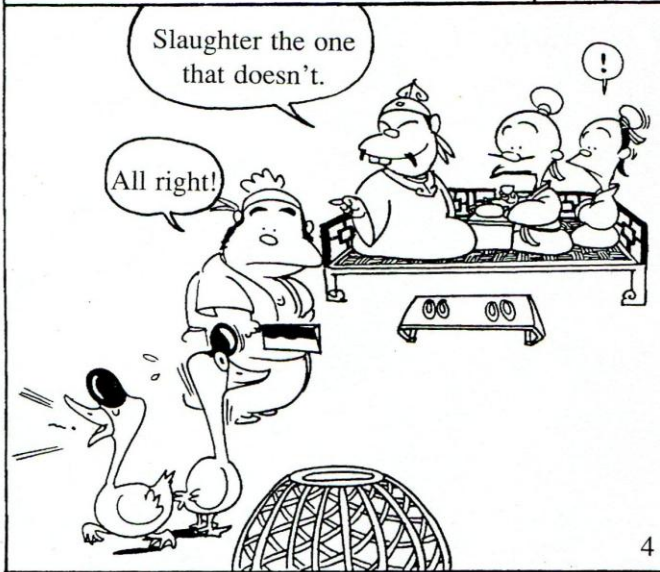
Between the two geese we have, one cackles and the other doesn't. Which one shall I slaughter?



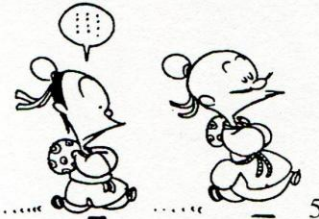
3

Slaughter the one that doesn't.

All right!



4

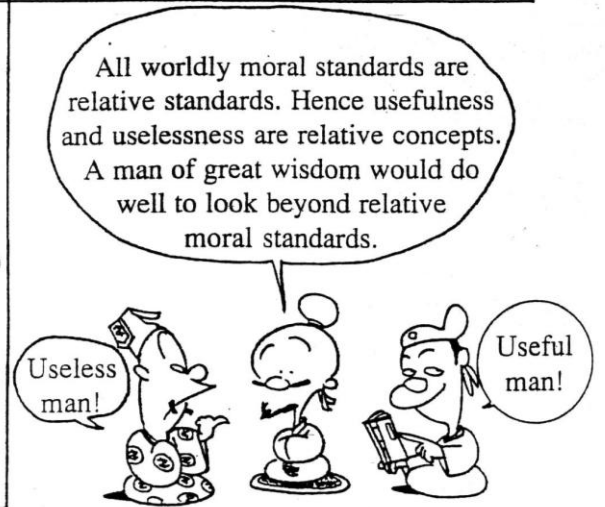
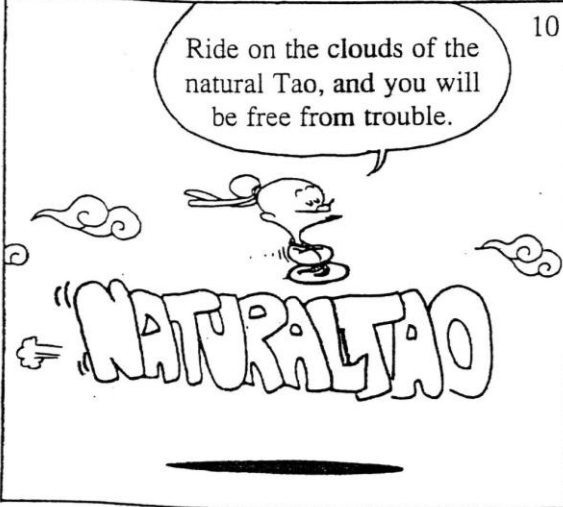
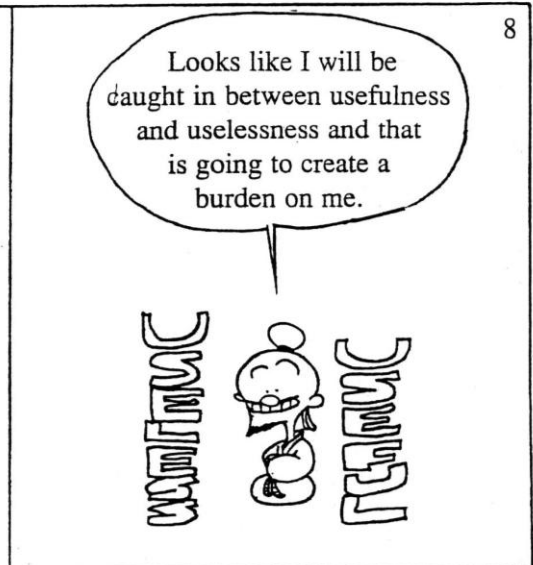
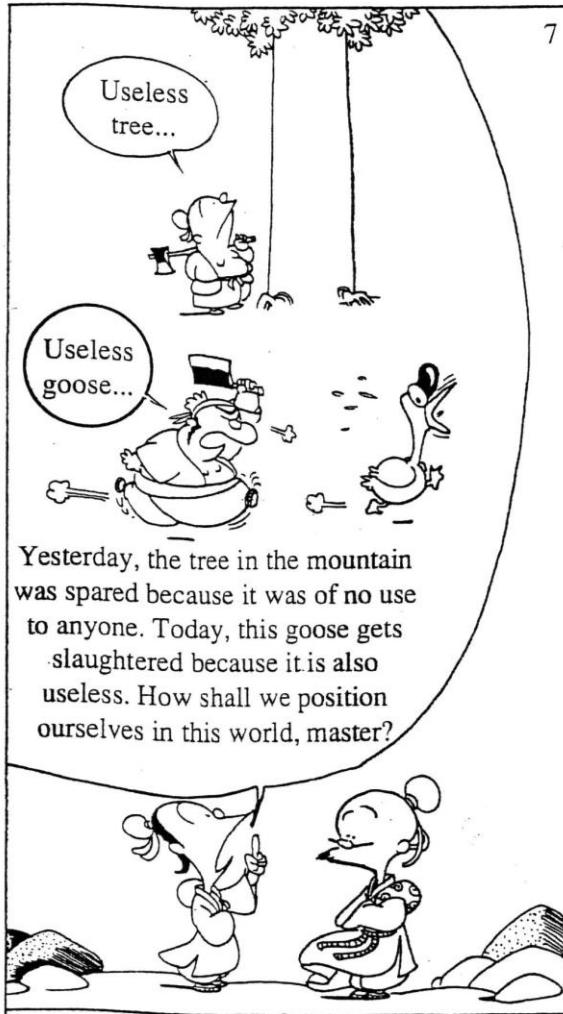


5

Why...? I just don't understand...



6



▪Appendix 3-7: There is Tao in robbers (Tsai, 1999)

**There is Tao
in Robbers**



Dao Zhi was a well-known thief, during the ancient times.

1

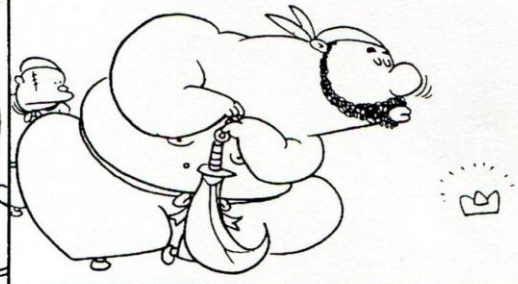


2



3

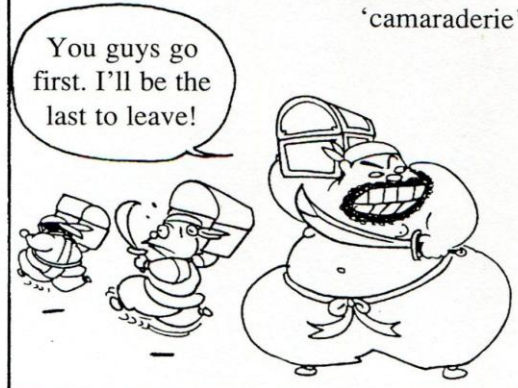
A ring-leader is able to foretell where the valuables are hidden. We call it 'wisdom'.



He leads the way in house-breaking. We call it 'courage'.



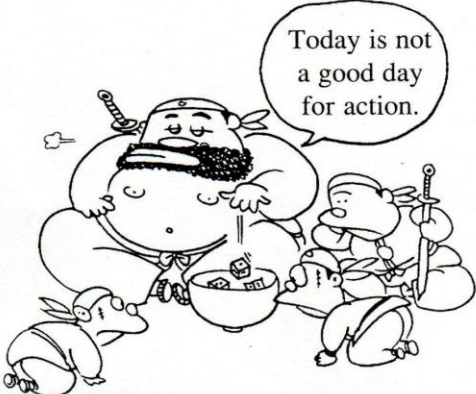
When the job is done, he is the last to leave the scene. We call it 'camaraderie'.



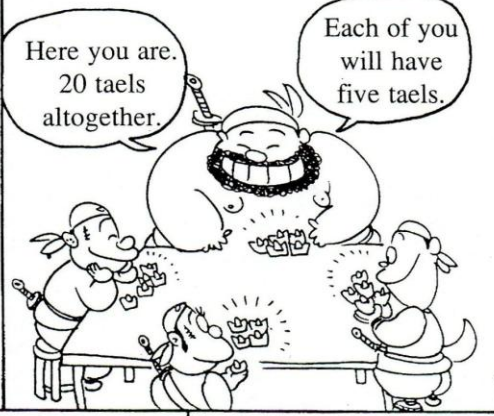
4

5

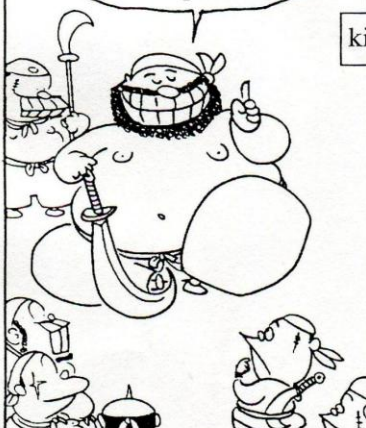
6 He weighs the situation carefully before taking action. We call it 'wit'.



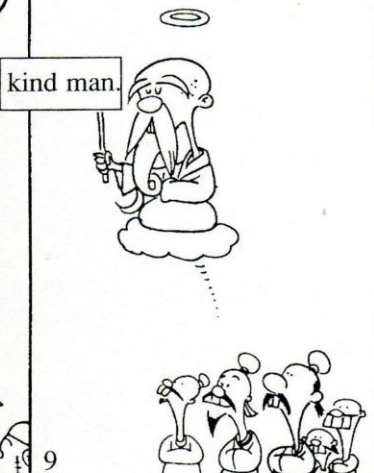
7 He divides the stolen goods evenly among his men. We call it 'benevolence.'



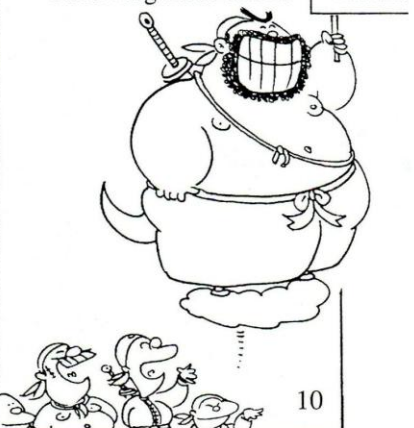
8 No one can qualify to be a ring-leader without practising these five etiquettes!



9 The kind man cannot practise kindness if he hasn't acquired the wisdom of a sage.



10 The wicked often use the sage's ethics as an amulet. They may not possibly succeed in becoming villains without borrowing these ethics. villain.



11 But there are obviously more wicked men than there are kind men, so the Tao of the sage does more harm than good to the people.



The wicked man also cannot practise wickedness if he hasn't acquired the wisdom of a sage.



▪ **Appendix 3-8: The portrait of Zhuang Zi**



**Appendix 4-1: The questionnaire contents of the Philosophical Beliefs
toward Stress Coping Inventory (120 items)**

Philosophical Beliefs toward Stress Coping Inventory

Dear students,

This is an academic survey to explore your thinking. We need your personal opinions; please set aside a little time to answer this sheet.

This survey is anonymous. All of your answers will only be used in academic statistical analysis. All data is confidential and please rest assured that all your thoughts are crucial to this study. Thank you for taking part in this study.

Department of Counselling
Natalie Fu

Part one: The following statements describe views that people might have in certain stressful situations. Some viewpoints may agree with yours, some may not. Please choose the level of your agreement or disagreement. There is no right answer; everyone has his/her own opinions. Therefore, please fill in the answer sheet according to your own thinking.

Strongly disagree=1; Disagree=2; Partially agree=3; Agree=4; Strongly agree=5.

1. The more knowledgeable, the more humble one is.
2. We should fight for what we think is right.
3. Every walk of life needs to be respected.
4. Everyone has a contribution to society.
5. You will lose your true self if you strive to meet other's expectations.
6. We need to keep continuously progressing to surpass our past achievements.
7. There is no absolute criterion by which to judge good or bad.
8. Charming appearance is important so that cosmetic surgery is worthy of promotion.

9. It is unreasonable to think that all lives are equal.
10. When we help others, we cannot consider what we can receive in return.
11. Everything needs to be done perfectly.
12. No one can be perfect.
13. Everyone is unequal as people have innate differences.
14. Obstinate people are very liable to get stressed.
15. A stubborn man will not comprehend the broad view.
16. For people in an inferior position, it is difficult for them to raise their social status.
17. Some knowledge cannot be expressed completely by language.
18. Human beings are passive.
19. Competition can increase people's motivation to make progress.
20. Competition is the source of stress.
21. The winner in a debate is the one whose opinion is true.
22. We need to forgive others' faults.
23. We need to be persistent in our viewpoints.
24. A person with low self-confidence will care about other's judgments.
25. There is much more knowledge we don't know than that which we know.
26. Knowledge is continually expanding as circumstances change.
27. In evaluating one's capability, one needs to compare with others' merits and defects.

28. Nobody is an enemy forever, for your whole life.
29. It is necessary to discard our own subjectivity.
30. We need to treat everyone equally without prejudice.
31. People are self-absorbed.
32. We need to do something that we need instead of what we want.
33. Ordinary life is kind of happiness.
34. Reducing desires would bring forth a happy life.
35. Extreme emotions are harmful to health.
36. Material gratification is important.
37. A person who expresses strong likes and dislikes would be a person with deep emotion.
38. Human desires are endless and can never be completely satisfied.
39. Life would be dull if our minds were always tranquil
40. A man must be influential in order to have a successful life.
41. Spiritual self-cultivation is more important than worldly gain.
42. If you have one more interest, it creates one more load.
43. Caring about success too much causes anxiety.
44. It is hard to live a simple life in modern society.
45. We can be closer to our pure nature by removing greed.
46. A placid life helps inspire insight.

47. The more desires, the more stress one has.
48. The way to be the master of oneself is to reject temptation.
49. A person who values psychological growth is likely to achieve a contented life.
50. Freedom of mind is shackled by greed.
51. A person needs to give up even a rare career opportunity if it risks one's health.
52. Cutting out individual desires helps to reduce the interpersonal conflicts.
53. One needs to satisfy physical needs before seeking spiritual peace satisfaction.
54. We need to calmly accept any outcome.
55. We need to actively pursue our ambitions to attain high achievement.
56. Creativity is motivated by one's passion.
57. Keeping in good health is more important than anything in life.
58. It is important to make oneself feel content.
59. We can prevent the mind from suffering if we set it free by putting aside thoughts of gain or loss.
60. The less desires we have, the better off we are.
61. One needs to tranquilize one's mind, then one can reflect.
62. One needs to give up a job if one is unfit for it.
63. Taking one's time is the ideal way of life.
64. One can still be happy even if one's wishes fail to come true.

65. Anger needs to be vented in order to reach an equilibrium.
66. Pursuit of power tends to create an aggressive personality.
67. To possess great aspirations makes life valuable.
68. The main reason for frustration is that one's desires are not satisfied.
69. When one has too many wants, it becomes hard to make decisions.
70. Life will be carefree if you are flexible.
71. We feel ill at ease to live idle lives.
72. An uncompromising attitude is conducive to overcoming difficulties
73. One can break through one's limitations by boosting morale.
74. It is awful when we cannot control our situation.
75. It is necessary to promote yourself to make the best impression.
76. It will lead to contrary results if one insists on one's own way.
77. We need to view things with an even temper.
78. Keep hope that if fate closes one door, another door will be opened.
79. Venting of emotions needs to be stopped before it goes too far.
80. While in another country, do as the natives do.
81. The best opportunities come to those who wait.
82. Sustaining an ecological balance is more important than economic development.
83. It is a maxim that winners are applauded and losers are looked down upon.

84. Concession can help reconcile an impasse.
85. Education according to the individual's natural tendency is the best way.
86. To lose face is very shameful.
87. Do not complain about fate.
88. One needs to work hard without any excuses to become an ideal person.
89. It is necessary to go back to Nature instead of creating too many artificial things.
90. Follow destiny and accept its tasks.
91. We need to keep struggling and never give up until the end.
92. Effectively utilizing natural resources can benefit our quality of life.
93. We can pursue our dream instead of demand it importunately.
94. No one can win forever.
95. People need to be educated to develop virtues.
96. It is stupid to let others take advantage of you.
97. All life is united and interdependent.
98. Act based on your capacity
99. We need to confront the issue of death rationally.
100. The side effects of advanced technology are worse than its contribution to convenience in modern life.
101. It is hard to transform one's destiny.
102. Educating each child at his own pace will lead to lack of efficiency.

103. There is no absolute gain from any event, because all things have two sides.
104. Changing perspectives can facilitate problem solving
105. Death is an unbearable grief.
106. People will be dissatisfied if technology stops advancing.
107. If you postpone dealing with problems, the situation will worsen.
108. Humbleness is the best attitude in life.
109. Rest is necessary in order to recharge one's energy.
110. Taking risks is necessary to create opportunities.
111. Economic gain is the main factor in motivating progress in society.
112. Forcing a measure through may cause unexpected consequences.
113. People who yearn for freedom from social conformity tend to have low self-control.
114. It is weak to adjust oneself to changing circumstances.
115. Take the world as it is because human destiny is unpredictable.
116. Opportunity is gained by effort.
117. Haste is liable to lead to mistakes.
118. The more one strives against failure, the braver one is.
119. Adapt to the circumstances of life so that we can live happily.
120. We need to take on the mission to eradicate corruption, regardless of individual safety.

Part two : **Background information**

This sheet will only be used in academic research and will be kept confidential.

___ A. Gender: 1. male; 2. female; 3. other: _____

___ B. Department: 1. Mechanical engineering; 2. Electrical engineering;
3. Electronic engineering; 4. Communication engineering;
5. Information management; 6. Marketing and distribution management;
7. Industrial management; 8. Industrial and commercial design;
9. Materials and textiles; 10. Health care administration; 11. Nursing

___ C. Your parents: 1. Parents both present in family; 2. Single parent
(separated, divorced, deceased); 3. Others (both deceased,...)

___ D. Residence: 1. home with family; 2. outside residence (including in
school dormitory and other places)

Stress Level Scale

Rate your stress level in the following items

No stress= 1; Low stress= 2; Moderate stress= 3; High stress= 4; Very high stress = 5

___ E. schoolwork; ___ F. personal health; ___ G. interpersonal relationships;

___ H. romantic relationship; ___ I. family communication;

___ J. career planning; ___ K. financial problems

This is the end of this survey. Please make sure all questions are complete.

Thank you very much for your cooperation!

Appendix 4-2: Summary table of item analysis

Item	t value (CR)	Sig.	Item-Total Correlation	Cronbach's Alpha if item deleted	Delete
q1	5.248	***	.351	.913	
q2	1.437		.204	.914	x
q3	6.239	***	.431	.912	
q4	1.797		.130	.914	x
q5	.868		.119	.914	x
q6	1.358		.131	.914	x
q7	6.466	***	.428	.912	
q8	.298		.082	.915	x
q9	.334		.036	.915	x
q10	5.050	***	.328	.913	
q11	.144		.007	.915	x
q12	6.331	***	.416	.913	
q13	8.914	***	.527	.912	
q14	.562		.016	.915	x
q15	8.370	***	.446	.912	
q16	5.469	***	.445	.912	
q17	5.636	***	.455	.913	
q18	1.430		.124	.915	x
q19	.190		.030	.914	x
q20	4.001	***	.323	.913	
q21	5.043	***	.387	.913	
q22	5.886	***	.353	.913	
q23	1.345		.182	.914	x
q24	1.660		.093	.915	x
q25	5.040	***	.370	.913	
q26	4.375	***	.318	.913	
q27	1.460		.177	.914	x
q28	5.632	***	.427	.913	
q29	8.375	***	.521	.912	
q30	7.532	***	.480	.912	
q31	.846		.120	.914	x
q32	8.558	***	.529	.912	
q33	5.518	***	.395	.913	
q34	6.030	***	.415	.913	
q35	5.958	***	.333	.913	
q36	.414		.059	.915	x

q37	8.851	***	.525	.912
q38	4.135	***	.348	.913
q39	1.012		.079	.915 ×
q40	5.080	***	.388	.913
q41	6.859	***	.440	.913
q42	6.992	***	.452	.913
q43	5.397	***	.354	.913
q44	.366		.084	.915 ×
q45	8.553	***	.546	.912
q46	6.142	***	.434	.912
q47	5.276	***	.331	.913
q48	7.508	***	.459	.912
q49	9.393	***	.530	.912
q50	4.882	***	.355	.913
q51	4.522	***	.335	.913
q52	7.268	***	.403	.913
q53	.888		.161	.914 ×
q54	5.619	***	.419	.913
q55	.286		.117	.914 ×
q56	.512		.104	.914 ×
q57	6.933	***	.423	.913
q58	5.586	***	.331	.913
q59	5.520	***	.423	.913
q60	.127		-.032	.915 ×
q61	5.190	***	.320	.913
q62	7.130	***	.434	.913
q63	6.277	***	.401	.913
q64	4.311	***	.337	.913
q65	7.728	***	.472	.912
q66	.142		.044	.915 ×
q67	.356		.049	.915 ×
q68	.242		.020	.915 ×
q69	1.609		.120	.914 ×
q70	5.678	***	.322	.913
q71	6.405	***	.449	.912
q72	.553		.172	.914 ×
q73	.220		.152	.914 ×
q74	6.109	***	.414	.913
q75	3.388	**	.431	.912
q76	3.862	***	.324	.913

q77	5.586	***	.314	.913
q78	6.821	***	.425	.913
q79	7.592	***	.487	.912
q80	4.426	***	.303	.913
q81	5.309	***	.337	.913
q82	5.480	***	.412	.913
q83	3.483	**	.330	.913
q84	4.480	***	.343	.913
q85	4.246	***	.308	.913
q86	.664		.080	.915 x
q87	4.012	***	.305	.913
q88	.219		.140	.914 x
q89	5.438	***	.326	.913
q90	5.275	***	.355	.913
q91	.353		.093	.914 x
q92	.017		.068	.914 x
q93	4.308	***	.308	.913
q94	5.709	***	.400	.913
q95	5.395	***	.345	.913
q96	3.720	***	.386	.913
q97	5.688	***	.334	.913
q98	6.304	***	.445	.912
q99	4.577	***	.384	.913
q100	6.953	***	.372	.913
q101	11.332	***	.658	.911
q102	1.243		.175	.914 x
q103	5.367	***	.310	.913
q104	4.870	***	.300	.913
q105	5.110	***	.306	.913
q106	1.811		.186	.914 x
q107	4.577	***	.362	.913
q108	4.948	***	.317	.913
q109	1.932		.110	.914 x
q110	.976		.094	.914 x
q111	.773		.131	.914 x
q112	6.993	***	.427	.913
q113	6.467	***	.395	.913
q114	.147		.062	.915 x
q115	8.001	***	.489	.912
q116	4.784	***	.305	.913

q117	5.019	***	.323	.913
q118	4.784	***	.441	.912
q119	6.940	***	.457	.912
q120	4.839	***	.304	.913

***P < .001 Alpha = 0.914

Appendix 4-3: Summary table of factor analysis and reliability analysis in unit B

	Factor 1	Factor 2	Factor 3	Factor 4	% Variance	of Cumulative %	α
q58	.776						
q57	.698						
q51	.690						
q42	.588				19.595	19.595	0.751
q65		.757					
q62		.632					
q37		.534			11.655	31.251	0.650
q46			.737				
q41			.645				
q45			.600				
q49			.516		11.063	42.314	0.677
q40				.778			
q59				.676			
q48				.647	10.794	53.108	0.655

Appendix 4-4: Summary table of factor analysis and reliability analysis in unit C

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	% Variance	of %	Cumulative %	α
q98	.757								
q90	.751								
q87	.653								
q94	.617					12.321		12.321	0.714
q78		.683							
q84		.671							
q103		.656							
q104		.579				11.861		24.182	0.708
q81			.747						
q70			.711						
q80			.673			10.546		34.728	0.669
q89				.631					
q100				.562					
q82				.494		10.242		44.970	0.651
q101					.821				
q99					.733				
q115					.569				
q79					.528	9.955		54.925	0.666

**Appendix 4-5: The questionnaire contents of the Philosophical Beliefs
toward Stress Coping Inventory (45 items)**

Philosophical Beliefs toward Stress Coping Inventory

Dear students,

This is an academic survey to explore your thinking. We need your personal opinions; please set aside a little time to answer this sheet.

This survey is anonymous. All of your answers will only be used in academic statistical analysis. All data is confidential and please rest assured that all your thoughts are crucial to this study. Thank your for taking part in this study.

Department of Counselling
Natalie Fu

Part one: The following statements describe views that people might have in certain stressful situations. Some viewpoints may agree with yours, some may not. Please choose the level of your agreement or disagreement. There is no right answer; everyone has his/her own opinions. Therefore, please fill in the answer sheet according to your own thinking.

Strongly disagree=1; Disagree=2; Partially agree=3; Agree=4; Strongly agree=5

1. Every walk of life needs to be respected.
2. There is no absolute criterion by which to judge good or bad.
3. When we help others, we cannot consider what we can receive in return.
4. Everyone is unequal as people have innate differences.
5. A stubborn man will not comprehend the broad view.
6. For people in an inferior position, it is difficult for them to raise their social status.
7. Some knowledge cannot be expressed completely by language.
8. The winner in a debate is the one whose opinion is true.

9. We need to forgive others' faults.
10. Knowledge is continually expanding as circumstances change.
11. Nobody is an enemy forever, for your whole life.
12. It is necessary to discard our own subjectivity.
13. We need to treat everyone equally without prejudice.
14. A person who expresses strong likes and dislikes would be a person with deep emotion.
15. A man must be influential in order to have a successful life.
16. Spiritual self-cultivation is more important than worldly gain.
17. If you have one more interest, it creates one more load.
18. We can be closer to our pure nature by removing greed.
19. A placid life helps inspire insight.
20. The way to be the master of oneself is to reject temptation.
21. A person who values psychological growth is likely to achieve a contented life.
22. A person needs to give up even a rare career opportunity if it risks one's health.
23. Keeping in good health is more important than anything in life.
24. It is important to make oneself feel content.
25. We can prevent the mind from suffering if we set it free by putting aside thoughts of gain or loss.
26. One needs to give up a job if one is unfit for it.

27. Anger needs to be vented in order to reach an equilibrium.
28. Life will be carefree if you are flexible.
29. Keep hope that if fate closes one door, another door will be opened.
30. Venting of emotions needs to be stopped before it goes too far.
31. While in another country, do as the natives do.
32. The best opportunities come to those who wait.
33. Sustaining an ecological balance is more important than economic development.
34. Making concessions is a kind of permissiveness.
35. Do not complain about fate.
36. It is necessary to go back to Nature instead of creating too many artificial things.
37. To accept one's destiny is cowardly.
38. No one can win forever.
39. Act based on your capacity
40. We need to confront the issue of death rationally.
41. The side effects of advanced technology are worse than its contribution to convenience in modern life.
42. It is hard to transform one's destiny.
43. There is no absolute gain from any event, because all things have two sides.
44. Changing perspectives can facilitate problem solving
45. Take the world as it is because human destiny is unpredictable.

Part two : **Background information**

This sheet will only be used in academic research and will be kept confidential.

___ A. Gender: 1. male; 2. female; 3. other: _____

___ B. Department: 1. Mechanical engineering; 2. Electrical engineering;
3. Electronic engineering; 4. Communication engineering;
5. Information management; 6. Marketing and distribution management;
7. Industrial management; 8. Industrial and commercial design;
9. Materials and textiles; 10. Health care administration; 11. Nursing

___ C. Your parents: 1. Parents both present in family; 2. Single parent
(separated, divorced, deceased); 3. Others (both deceased,...)

___ D. Residence: 1. home with family; 2. outside residence (including in
school dormitory and other places)

Stress Level Scale

Rate your stress level in the following items

No stress=1; Low stress=2; Moderate stress=3; High stress=4; Very high stress=5

___ E. schoolwork; ___ F. personal health; ___ G. interpersonal relationships;

___ H. romantic relationship; ___ I. family communication;

___ J. career planning; ___ K. financial problems

This is the end of this survey. Please make sure all questions are complete.
Thank you very much for your cooperation!

Appendix 4-6: Results of factor analysis of 45 items based on Zhuang Zi's concepts

A. Discarding Prejudice

13 questions (pilot study: q1~q31)

	Factors	Items
1	Be Selfless	30. We need to treat everyone equally without prejudice. 10. When we help others, we cannot consider what we can receive in return. 28. Nobody is an enemy forever, for your whole life. 22. We need to forgive others' faults.
2	Seek knowledge beyond language	26. Knowledge is continually expanding as circumstances change. 17. Some knowledge cannot be expressed completely by language. 21. The winner in a debate is the one whose opinion is true. ^R
3	Quit stubborn	29. It is necessary to discard our own subjectivity. 7. There is no absolute criterion by which to judge good or bad. 15. A stubborn man will not comprehend the broad view.
4	Treat others equally	16. For people in an inferior position, it is difficult for them to raise their social status. ^R 13. Everyone is unequal as people have innate differences. ^R 3. Every walk of life needs to be respected.

B. Removing Greed

14 questions (pilot study: q32~q69)

	Factors	Items
1	Nourish health	<p>58. It is important to make oneself feel content.</p> <p>57. Keeping in good health is more important than anything in life.</p> <p>51. A person needs to give up even a rare career opportunity if it risks one's health.</p> <p>42. If you have one more interest, it creates one more load.</p>
2	Manage emotions	<p>65. Anger needs to be vented in order to reach an equilibrium.^R</p> <p>62. One needs to give up a job if one is unfit for it.</p> <p>37. A person who expresses strong likes and dislikes would be a person with deep emotion.^R</p>
3	Purify the mind	<p>46. A placid life helps inspire insight.</p> <p>41. Spiritual self-cultivation is more important than worldly gain.</p> <p>45. We can be closer to our pure nature by removing greed.</p> <p>49. A person who values psychological growth is likely to achieve a contented life.</p>
4	Free the spirit	<p>40. A man must be influential in order to have a successful life.^R</p> <p>59. We can prevent the mind from suffering if we set it free by putting aside thoughts of gain or loss.</p> <p>48. The way to be the master of oneself is to reject temptation.</p>

C. Forgoing Demands

18 questions (pilot study: q70~q120)

	Factors	Items
1	Accept life's fate	98. Act based on your capacity. 90. To accept one's destiny is cowardly. ^R 87. Do not complain about fate. 94. No one can win forever.
2	Be optimistic in adversity	78. Keep hope that if fate closes one door, another door will be opened. 84. Making concessions is a kind of permissiveness. ^R 103. There is no absolute gain from any event, because all things have two sides. 104. Changing perspectives can facilitate problem solving.
3	Embrace flexibility	81. The best opportunities come to those who wait. 70. Life will be carefree if you are flexible. 80. While in another country, do as the natives do.
4	Accommodate to Nature	89. It is necessary to go back to Nature instead of creating too many artificial things. 100. The side effects of advanced technology are worse than its contribution to convenience in modern life. 82. Sustaining an ecological balance is more important than economic development.
5	Accept birth and death	101. It is hard to transform one's destiny. 99. We need to confront the issue of death rationally. 115. Take the world as it is because human destiny is unpredictable. 79. Venting of emotions needs to be stopped before it goes too far.

^R reverse question: A negative response to the item is correlated with the rating scale.

Appendix 4-7: Factor analysis and reliability analysis of units A, B, C.

	Unit A (q1~q31)	Unit B (q32~q69)	Unit C (q70- q120)
Factor (Extraction Method: Principal Component Analysis)	4	4	5
Numbers of deletion	4 (q1,12,20,25)	13 (q32,33,34,35,38, 43,47,50,52,54, 61,63,64)	21 (q71,74,75,76,77, 83,85,93,95,96, 97,105,107,108,112,113, 116,117,118,119,120)
KMO test (Kaiser-Meyer-Olkin Measure of Sampling Adequacy)	0.763	0.828	0.777
Bartlett test (Bartlett's Test of Sphericity) Sig.	P=0.000	P=0.000	P=0.000
Cumulative explanation %	57.199%	53.108%	54.925%
Cronbach's α	0.784 (13 items)	0.797 (14 items)	0.781 (18 items)
Total Reliability (45 items)	0.907		

*factor analysis is not suitable if $KMO < 0.5$ (Kaiser, 1974).

Appendix 5-1: Analysis of demographic variables

Group	Demographic variables	Items	N	Chi-Square χ^2	Sig.	
Group 1	Gender	Male	79	3.559	.059	
		Female	57			
	Department	Communication Engineering	43	.191	.909	
		Information Management	46			
		Marketing and Distribution Management	47			
	Parental status	Both parents present in family	95	93.632	***	.000
		Single parent	37			
		Others	4			
	Residential status	Lives with family	124	92.235	***	.000
		Outside residence	12			
Group 2	Gender	Male	60	2.806	.094	
		Female	43			
	Department	Electronic Engineering	32	.235	.889	
		Industrial Management	36			
		Industrial and Commercial Design	1			
		Health care Administration	34			
	Parental status	Both parents present in family	80	95.320	***	.000
		Single parent	20			
		Others	3			
	Residential status	Lives with family	93	66.833	***	.000
Outside residence		10				
Group 3	Gender	Male	94	67.846	***	.000
		Female	10			
	Department	Mechanical Engineering	41	1.865	.393	
		Electrical Engineering	33			
		Materials and Textiles	30			
	Parental status	Both parents present in family	84	109.981	***	.000
		Single parent	19			
		Others	1			
	Residential status	Lives with family	97	77.885	***	.000
		Outside residence	7			
Total	gender	Male	233	44.108	***	.000
		Female	110			
	Department	Communication Engineering	43	8.526	.384	
		Information Management	46			

	Marketing and Distribution Management	47			
	Electronic Engineering	32			
	Industrial Management	36			
	Industrial and Commercial Design	1			
	Health care Administration	34			
	Mechanical Engineering	41			
	Electrical Engineering	33			
	Materials and Textiles	30			
Parental status	Both parents present in family	259	294.793	***	.000
	Single parent	76			
	Others	8			
Residential status	Lives with family	314	236.808	***	.000
	Outside residence	29			

* The mean difference is significant at the .05 level.

** The mean difference is significant at the .01 level.

*** The mean difference is significant at the .001 level.

Appendix 5-2: Bivariate analyses for the demographic variables

Bivariate analysis for group and gender

			Group			Total
			Bibliotherapy group	Self-help group	Control group	
Gender	male	Count	79	60	94	233
		Expected Count	92.4	70.0	70.6	233.0
		% within Gender	33.9%	25.8%	40.3%	100.0%
		% within Group	58.1%	58.3%	90.4%	67.9%
		% of Total	23.0%	17.5%	27.4%	67.9%
	female	Count	57	43	10	110
		Expected Count	43.6	33.0	33.4	110.0
		% within Gender	51.8%	39.1%	9.1%	100.0%
		% within Group	41.9%	41.7%	9.6%	32.1%
		% of Total	16.6%	12.5%	2.9%	32.1%
Total		Count	136	103	104	343
		Expected Count	136.0	103.0	104.0	343.0
		% within Gender	39.7%	30.0%	30.3%	100.0%
		% within Group	100.0%	100.0%	100.0%	100.0%
		% of Total	39.7%	30.0%	30.3%	100.0%

Pearson Chi-Square = 34.545*** (p.=0.000)

Bivariate analysis for group and department

		Bibliotherapy group	Self-help group	Control group	Total
Mechanical engineering	Count	0	0	41	41
	Expected Count	16.3	12.2	12.5	41.0
	% within Department	.0%	.0%	100.0%	100.0%
	% within Group	.0%	.0%	39.4%	12.0%
	% of Total	.0%	.0%	12.0%	12.0%
Electrical engineering	Count	0	0	33	33
	Expected Count	13.1	9.8	10.0	33.0
	% within Department	.0%	.0%	100.0%	100.0%
	% within Group	.0%	.0%	31.7%	9.6%
	% of Total	.0%	.0%	9.6%	9.6%
Electronic engineering	Count	0	32	0	32
	Expected Count	12.7	9.5	9.7	32.0
	% within Department	.0%	100.0%	.0%	100.0%
	% within Group	.0%	31.4%	.0%	9.4%
	% of Total	.0%	9.4%	.0%	9.4%
Communication engineering	Count	43	0	0	43
	Expected Count	17.1	12.8	13.1	43.0
	% within Department	100.0%	.0%	.0%	100.0%
	% within Group	31.6%	.0%	.0%	12.6%
	% of Total	12.6%	.0%	.0%	12.6%
Information management	Count	46	0	0	46
	Expected Count	18.3	13.7	14.0	46.0
	% within Department	100.0%	.0%	.0%	100.0%
	% within Group	33.8%	.0%	.0%	13.5%
	% of Total	13.5%	.0%	.0%	13.5%
Marketing and distribution management	Count	47	0	0	47
	Expected Count	18.7	14.0	14.3	47.0
	% within Department	100.0%	.0%	.0%	100.0%

	% within Group	34.6%	.0%	.0%	13.7%
	% of Total	13.7%	.0%	.0%	13.7%
Industrial management	Count	0	36	0	36
	Expected Count	14.3	10.7	10.9	36.0
	% within Department	.0%	100.0%	.0%	100.0%
	% within Group	.0%	35.3%	.0%	10.5%
	% of Total	.0%	10.5%	.0%	10.5%
Materials and textiles	Count	0	0	30	30
	Expected Count	11.9	8.9	9.1	30.0
	% within Department	.0%	.0%	100.0%	100.0%
	% within Group	.0%	.0%	28.8%	8.8%
	% of Total	.0%	.0%	8.8%	8.8%
Health care administration	Count	0	34	0	34
	Expected Count	13.5	10.1	10.3	34.0
	% within Department	.0%	100.0%	.0%	100.0%
	% within Group	.0%	33.3%	.0%	9.9%
	% of Total	.0%	9.9%	.0%	9.9%
Total	Count	136	102	104	342
	Expected Count	136.0	102.0	104.0	342.0
	% within Department	39.8%	29.8%	30.4%	100.0%
	% within Group	100.0%	100.0%	100.0%	100.0%
	% of Total	39.8%	29.8%	30.4%	100.0%

Pearson Chi-Square = 684.000*** (p.=0.000)

Bivariate analysis for group and parental status

			Group			Total
			Bibliotherapy group	Self-help group	Control group	
Parental status	Both parents	Count	95	80	84	259
		Expected Count	102.7	77.8	78.5	259.0
		% within Parents	36.7%	30.9%	32.4%	100.0%
		% within Group	69.9%	77.7%	80.8%	75.5%
		% of Total	27.7%	23.3%	24.5%	75.5%
	Single parent	Count	37	20	19	76
		Expected Count	30.1	22.8	23.0	76.0
		% within Parents	48.7%	26.3%	25.0%	100.0%
		% within Group	27.2%	19.4%	18.3%	22.2%
		% of Total	10.8%	5.8%	5.5%	22.2%
	Others	Count	4	3	1	8
		Expected Count	3.2	2.4	2.4	8.0
		% within Parents	50.0%	37.5%	12.5%	100.0%
		% within Group	2.9%	2.9%	1.0%	2.3%
		% of Total	1.2%	.9%	.3%	2.3%
Total		Count	136	103	104	343
		Expected Count	136.0	103.0	104.0	343.0
		% within Parents	39.7%	30.0%	30.3%	100.0%
		% within Group	100.0%	100.0%	100.0%	100.0%
		% of Total	39.7%	30.0%	30.3%	100.0%

Pearson Chi-Square= 4.847 (P= 0.303)

Bivariate analysis for group and residential status

			Group			Total
			Bibliotherapy group	Self-help group	Control group	
Residence	Home with family	Count	124	93	97	314
		Expected Count	124.5	94.3	95.2	314.0
		% within Residence	39.5%	29.6%	30.9%	100.0%
		% within Group	91.2%	90.3%	93.3%	91.5%
	Outside residence	Count	12	10	7	29
		Expected Count	11.5	8.7	8.8	29.0
		% within Residence	41.4%	34.5%	24.1%	100.0%
		% within Group	8.8%	9.7%	6.7%	8.5%
	Total	Count	136	103	104	343
		Expected Count	136.0	103.0	104.0	343.0
% within Residence		39.7%	30.0%	30.3%	100.0%	
% within Group		100.0%	100.0%	100.0%	100.0%	
	% of Total	39.7%	30.0%	30.3%	100.0%	

Pearson Chi-Square= 0.633 (P= 0.729)

Bivariate analysis for gender and department

			Gender		Total
			male	female	
Department	Mechanical engineering	Count	41	0	41
		Expected Count	27.8	13.2	41.0
% within Department		100.0%	.0%	100.0%	
% within Gender		17.7%	.0%	12.0%	
% of Total		12.0%	.0%	12.0%	
Electrical engineering	Count	32	1	33	
	Expected Count	22.4	10.6	33.0	
	% within Department	97.0%	3.0%	100.0%	
	% within Gender	13.8%	.9%	9.6%	
	% of Total	9.4%	.3%	9.6%	
Electronic engineering	Count	32	0	32	
	Expected Count	21.7	10.3	32.0	
	% within Department	100.0%	.0%	100.0%	
	% within Gender	13.8%	.0%	9.4%	
	% of Total	9.4%	.0%	9.4%	
Communication engineering	Count	42	1	43	
	Expected Count	29.2	13.8	43.0	
	% within Department	97.7%	2.3%	100.0%	
	% within Gender	18.1%	.9%	12.6%	
	% of Total	12.3%	.3%	12.6%	
Information management	Count	22	24	46	
	Expected Count	31.2	14.8	46.0	
	% within Department	47.8%	52.2%	100.0%	
	% within Gender	9.5%	21.8%	13.5%	
	% of Total	6.4%	7.0%	13.5%	
Marketing and distribution management	Count	15	32	47	
	Expected Count	31.9	15.1	47.0	
	% within Department	31.9%	68.1%	100.0%	

	% within Gender	6.5%	29.1%	13.7%
	% of Total	4.4%	9.4%	13.7%
Industrial management	Count	23	13	36
	Expected Count	24.4	11.6	36.0
	% within Department	63.9%	36.1%	100.0%
	% within Gender	9.9%	11.8%	10.5%
	% of Total	6.7%	3.8%	10.5%
Materials and textiles	Count	21	9	30
	Expected Count	20.4	9.6	30.0
	% within Department	70.0%	30.0%	100.0%
	% within Gender	9.1%	8.2%	8.8%
	% of Total	6.1%	2.6%	8.8%
Health care administration	Count	4	30	34
	Expected Count	23.1	10.9	34.0
	% within Department	11.8%	88.2%	100.0%
	% within Gender	1.7%	27.3%	9.9%
	% of Total	1.2%	8.8%	9.9%
Total	Count	232	110	342
	Expected Count	232.0	110.0	342.0
	% within Department	67.8%	32.2%	100.0%
	% within Gender	100.0%	100.0%	100.0%
	% of Total	67.8%	32.2%	100.0%

Pearson Chi-Square= 150.547*** (p.=0.000)

Bivariate analysis for gender and parental status

			Gender		Total
			male	female	
Parental status	Both parents	Count	176	83	259
		Expected Count	175.9	83.1	259.0
		% within Parents	68.0%	32.0%	100.0%
		% within Gender	75.5%	75.5%	75.5%
		% of Total	51.3%	24.2%	75.5%
	Single parent	Count	52	24	76
		Expected Count	51.6	24.4	76.0
		% within Parents	68.4%	31.6%	100.0%
		% within Gender	22.3%	21.8%	22.2%
		% of Total	15.2%	7.0%	22.2%
	Others	Count	5	3	8
		Expected Count	5.4	2.6	8.0
		% within Parents	62.5%	37.5%	100.0%
		% within Gender	2.1%	2.7%	2.3%
		% of Total	1.5%	.9%	2.3%
Total		Count	233	110	343
		Expected Count	233.0	110.0	343.0
		% within Parents	67.9%	32.1%	100.0%
		% within Gender	100.0%	100.0%	100.0%
		% of Total	67.9%	32.1%	100.0%

Pearson Chi-Square= 0.117 (p.= 0.943)

Bivariate analysis for gender and residential status

			Gender		Total
			male	female	
Residence	Home with family	Count	216	98	314
		Expected Count	213.3	100.7	314.0
		% within Residence	68.8%	31.2%	100.0%
		% within Gender	92.7%	89.1%	91.5%
		% of Total	63.0%	28.6%	91.5%
	Outside residence	Count	17	12	29
		Expected Count	19.7	9.3	29.0
		% within Residence	58.6%	41.4%	100.0%
		% within Gender	7.3%	10.9%	8.5%
		% of Total	5.0%	3.5%	8.5%
Total		Count	233	110	343
		Expected Count	233.0	110.0	343.0
		% within Residence	67.9%	32.1%	100.0%
		% within Gender	100.0%	100.0%	100.0%
		% of Total	67.9%	32.1%	100.0%

Pearson Chi-Square= 1.260 (p.=0.262)

Bivariate analysis for parental status and department

			Parental status			Total
			both parents	single parent	others	
Department	Mechanical engineering	Count	33	7	1	41
		Expected Count	30.9	9.1	1.0	41.0
		% within Department	80.5%	17.1%	2.4%	100.0%
		% within Parents	12.8%	9.2%	12.5%	12.0%
		% of Total	9.6%	2.0%	.3%	12.0%
	Electrical engineering	Count	27	6	0	33
		Expected Count	24.9	7.3	.8	33.0
		% within Department	81.8%	18.2%	.0%	100.0%
		% within Parents	10.5%	7.9%	.0%	9.6%
		% of Total	7.9%	1.8%	.0%	9.6%
	Electronic engineering	Count	23	9	0	32
		Expected Count	24.1	7.1	.7	32.0
		% within Department	71.9%	28.1%	.0%	100.0%
		% within Parents	8.9%	11.8%	.0%	9.4%
		% of Total	6.7%	2.6%	.0%	9.4%
Communication engineering	Count	31	11	1	43	
	Expected Count	32.4	9.6	1.0	43.0	
	% within Department	72.1%	25.6%	2.3%	100.0%	
	% within	12.0%	14.5%	12.5%	12.6%	

	Parents % of Total	9.1%	3.2%	.3%	12.6%
Information management	Count	33	13	0	46
	Expected Count	71.7%	28.3%	.0%	100.0%
	% within Department	71.7%	28.3%	.0%	100.0%
	% within Parents	12.8%	17.1%	.0%	13.5%
	% of Total	9.6%	3.8%	.0%	13.5%
Marketing and distribution management	Count	31	13	3	47
	Expected Count	35.5	10.4	1.1	47.0
	% within Department	66.0%	27.7%	6.4%	100.0%
	% within Parents	12.0%	17.1%	37.5%	13.7%
	% of Total	9.1%	3.8%	.9%	13.7%
Industrial management	Count	28	7	1	36
	Expected Count	27.2	8.0	.8	36.0
	% within Department	77.8%	19.4%	2.8%	100.0%
	% within Parents	10.9%	9.2%	12.5%	10.5%
	% of Total	8.2%	2.0%	.3%	10.5%
Materials and textiles	Count	24	6	0	30
	Expected Count	22.6	6.7	.7	30.0
	% within Department	80.0%	20.0%	.0%	100.0%
	% within Parents	9.3%	7.9%	.0%	8.8%
	% of Total	7.0%	1.8%	.0%	8.8%

	Health care administration	Count	28	4	2	34
		Expected Count	25.6	7.6	.8	34.0
		% within Department	82.4%	11.8%	5.9%	100.0%
		% within Parents	10.9%	5.3%	25.0%	9.9%
		% of Total	8.2%	1.2%	.6%	9.9%
Total		Count	258	76	8	342
		Expected Count	258.0	76.0	8.0	342.0
		% within Department	75.4%	22.2%	2.3%	100.0%
		% within Parents	100.0%	100.0%	100.0%	100.0%
		% of Total	75.4%	22.2%	2.3%	100.0%

Pearson Chi-Square=14.539 (p.=0.559)

9 cells (33.3%) have expected count less than 5. The minimum expected count is .70.

Fisher's Exact Test cannot be computed because there is insufficient memory.

Bivariate analysis for parental status and residential status

			Parental status			Total
			Both parents	Single parent	Others	
Residence	home with family	Count	241	67	6	314
		Expected Count	237.1	69.6	7.3	314.0
		% within Residence	76.8%	21.3%	1.9%	100.0%
		% within Parents	93.1%	88.2%	75.0%	91.5%
		% of Total	70.3%	19.5%	1.7%	91.5%
	outside residence	Count	18	9	2	29
		Expected Count	21.9	6.4	.7	29.0
		% within Residence	62.1%	31.0%	6.9%	100.0%
		% within Parents	6.9%	11.8%	25.0%	8.5%
		% of Total	5.2%	2.6%	.6%	8.5%
Total	Count	259	76	8	343	
	Expected Count	259.0	76.0	8.0	343.0	
	% within Residence	75.5%	22.2%	2.3%	100.0%	
	% within Parents	100.0%	100.0%	100.0%	100.0%	
	% of Total	75.5%	22.2%	2.3%	100.0%	

Pearson Chi-Square=4.714 (p.= 0.095)

Bivariate analysis for residential status and department

			Residential status		Total
			Home With family	Outside residence	
Department	Mechanical engineering	Count	37	4	41
		Expected Count	37.5	3.5	41.0
		% within Department	90.2%	9.8%	100.0%
		% within Residence	11.8%	13.8%	12.0%
		% of Total	10.8%	1.2%	12.0%
	Electrical engineering	Count	31	2	33
		Expected Count	30.2	2.8	33.0
		% within Department	93.9%	6.1%	100.0%
		% within Residence	9.9%	6.9%	9.6%
		% of Total	9.1%	.6%	9.6%
	Electronic engineering	Count	31	1	32
		Expected Count	29.3	2.7	32.0
		% within Department	96.9%	3.1%	100.0%
		% within Residence	9.9%	3.4%	9.4%
		% of Total	9.1%	.3%	9.4%
	Communication engineering	Count	39	4	43
		Expected Count	39.4	3.6	43.0
		% within Department	90.7%	9.3%	100.0%
		% within Residence	12.5%	13.8%	12.6%
		% of Total	11.4%	1.2%	12.6%
Information management	Count	43	3	46	
	Expected Count	42.1	3.9	46.0	
	% within Department	93.5%	6.5%	100.0%	
	% within Residence	13.7%	10.3%	13.5%	
	% of Total	12.6%	.9%	13.5%	
Marketing and distribution management	Count	42	5	47	

	Expected Count	43.0	4.0	47.0
	% within Department	89.4%	10.6%	100.0%
	% within Residence	13.4%	17.2%	13.7%
	% of Total	12.3%	1.5%	13.7%
Industrial management	Count	31	5	36
	Expected Count	32.9	3.1	36.0
	% within Department	86.1%	13.9%	100.0%
	% within Residence	9.9%	17.2%	10.5%
	% of Total	9.1%	1.5%	10.5%
Materials and textiles	Count	29	1	30
	Expected Count	27.5	2.5	30.0
	% within Department	96.7%	3.3%	100.0%
	% within Residence	9.3%	3.4%	8.8%
	% of Total	8.5%	.3%	8.8%
Health care administration	Count	30	4	34
	Expected Count	31.1	2.9	34.0
	% within Department	88.2%	11.8%	100.0%
	% within Residence	9.6%	13.8%	9.9%
	% of Total	8.8%	1.2%	9.9%
Total	Count	313	29	342
	Expected Count	313.0	29.0	342.0
	% within Department	91.5%	8.5%	100.0%
	% within Residence	100.0%	100.0%	100.0%
	% of Total	91.5%	8.5%	100.0%

9 cells (50.0%) have expected count less than 5.

Fisher's Exact Test= 4.735 (p.=0.792)

Appendix 5-3: Analysis of stress levels (pre-test) in terms of demographic variables

Stress level variable	Gender		Department		Parental status		Residential status	
	t	Sig.	F	Sig.	F	Sig.	t	Sig.
School Work	.876	.382	2.379*	.017	.575	.563	-.795	.427
Personal health	-.445	.657	.386	.928	.321	.725	-.591	.555
Interpersonal relationships	-1.120	.264	1.480	.163	1.442	.238	.765	.445
Romantic relationships	1.117	.265	2.115*	.034	.301	.740	-.260	.795
Family communication	-1.642	.102	1.046	.401	1.116	.329	.817	.415
Career planning	-.080	.936	2.334*	.019	.700	.497	.029	.977
Financial problems	-.101	.919	1.724	.092	3.397*	.035	-.967	.334

* The mean difference is significant at the .05 level.

Appendix 5-4: Analysis of variance for stress in School Work (pre-test) among departments

Stress level variable	Department	N	Mean	Std. D	F	Sig.
School Work	Mechanical engineering	41	3.20	1.100	2.379*	.017
	Electrical engineering	33	3.27	.977		
	Electronic engineering	32	3.47	1.047		
	Communication engineering	43	3.05	1.133		
	Information management	46	3.41	.956		
	Marketing and distribution management	47	3.32	1.086		
	Industrial management	36	2.61	.994		
	Materials and textiles	30	3.37	1.098		
	Health care administration	34	2.97	1.114		

**Appendix 5-5: Analysis of Variance for stress in romantic relationships (pre-test)
among departments**

Source of Stress	Department	N	Mean	Std. D	F	Sig.
Romantic relationships	Mechanical engineering	41	2.56	1.205	2.115*	.034
	Electrical engineering	33	2.48	1.482		
	Electronic engineering	32	2.56	1.413		
	Communication engineering	43	2.00	.926		
	Information management	46	2.13	1.166		
	Marketing and distribution management	47	2.30	1.121		
	Industrial management	36	2.47	1.320		
	Materials and textiles	30	2.50	1.225		
	Health care administration	34	1.74	.963		

**Appendix 5-6: Scheffe Post-Hoc procedure for stress in Career Planning (pre-test)
among departments**

Post-Hoc	Sig.	Post-Hoc	Sig.	Post-Hoc	Sig.
ME < E ₁ E	.979	E ₁ E < IdM	1.000	CE < MT	1.000
ME < E ₂ E	.756	E ₁ E < MT	.978	CE > HA	1.000
ME < CE	.719	E ₁ E < HA	1.000	IfM > MdM	.982
ME < IfM	.049	E ₂ E > CE	1.000	IfM > IdM	.861
ME < MdM	.541	E ₂ E < IfM	.981	IfM > MT	1.000
ME < IdM	.917	E ₂ E < MdM	1.000	IfM > HA	.896
ME < MT	.395	E ₂ E > IdM	1.000	MdM > IdM	1.000
ME < HA	.905	E ₂ E < MT	1.000	MdM < MT	1.000
E ₁ E < E ₂ E	1.000	E ₂ E > HA	1.000	MdM > HA	1.000
E ₁ E < CE	1.000	CE < IfM	.951	IdM < MT	.995
E ₁ E < IfM	.736	CE < MdM	1.000	IdM < HA	1.000
E ₁ E < MdM	.998	CE > IdM	1.000	MT > HA	.997

PS: ME=Mechanical Engineering; E₁E=Electrical Engineering;

E₂E=Electronic Engineering; CE=Communication Engineering;

IfM=Information Management; MdM=Marketing and Distribution Management;

IdM=Industrial Management; MT=Materials and Textiles;

HA=Health care Administration

Appendix 5-7: Analysis of Variance of levels of agreement with Zhuang Zi's concepts in the pre-test: Comparison among groups

Concept scales	Group	N	Mean	Std. D	F	Sig.	Scheffe Post-Hoc	Sig.
Discarding Prejudice	Gp1	136	45.33	4.964	2.319	.100		
	Gp2	103	46.81	5.090				
	Gp3	104	45.82	5.826				
Removing Greed	Gp1	136	49.52	5.958	0.771	.463		
	Gp2	103	50.31	5.629				
	Gp3	104	50.34	5.916				
Forgoing Demands	Gp1	136	59.74	5.552	12.349	.000	Gp1 > Gp2	.508
	Gp2	103	58.78	5.504			Gp1 > Gp3	.000
	Gp3	104	55.72	7.924			Gp2 > Gp3	.003
Total scale (Sum of scores on all concepts)	Gp1	136	154.60	10.711	2.627	.074		
	Gp2	103	155.89	12.309				
	Gp3	104	151.88	15.857				

Appendix 5-8: Analysis of Variance of levels of agreement with Zhuang Zi's concepts among groups in the post-test

Concept scale	Group	N	Mean	Std. D	F	Sig.	Scheffe Post-Hoc	Sig.
Discarding Prejudice	Gp1	136	52.87	4.488	52.549	.000	Gp1 > Gp2	.000
	Gp2	103	49.16	5.461			Gp1 > Gp3	.000
	Gp3	104	46.17	5.340			Gp2 > Gp3	.000
Removing Greed	Gp1	136	57.52	6.941	41.700	.000	Gp1 > Gp2	.000
	Gp2	103	51.81	7.708			Gp1 > Gp3	.000
	Gp3	104	49.62	6.229			Gp2 > Gp3	.080
Forgoing Demands	Gp1	136	67.39	7.617	61.945	.000	Gp1 > Gp2	.000
	Gp2	103	63.15	7.823			Gp1 > Gp3	.000
	Gp3	104	56.88	6.094			Gp2 > Gp3	.000
Total scale	Gp1	136	177.78	16.352	75.448	.000	Gp1 > Gp2	.000
	Gp2	103	164.11	16.852			Gp1 > Gp3	.000
	Gp3	104	152.66	13.135			Gp2 > Gp3	.000

Appendix 5-9: Analysis of cognitive change between pre-test and post-test in Group 2

Concept scales	Test	Mean	Std. D	t	Sig.
Discarding Prejudice	pre-test	46.81	5.090	-3.919	.000
	post-test	49.16	5.461		
Removing Greed	pre-test	50.31	5.629	-1.835	.069
	post-test	51.81	7.708		
Forgoing Demands	pre-test	58.78	5.504	-5.745	.000
	post-test	63.15	7.823		
Total	pre-test	155.89	12.309	-5.448	.000
	post-test	164.11	16.852		

Appendix 5-10: Analysis of cognitive change between pre-test and post-test in Group 3

Concept scales	Test	Mean	Std. D	t	Sig.
Discarding Prejudice	pre-test	45.82	5.826	-.651	.517
	post-test	46.17	5.340		
Removing Greed	pre-test	50.34	5.916	1.291	.199
	post-test	49.62	6.229		
Forgoing Demands	pre-test	55.72	7.924	-1.483	.141
	post-test	56.88	6.094		
Total	pre-test	151.88	15.857	-.654	.515
	post-test	152.66	13.135		

Appendix 5-11: Analysis of difference in stress levels among groups in the pre-test

Stress Scale	Group	N	Mean	Std. D	F	Sig.	Scheffe Post-Hoc	Sig.
School Work	Gp1	136	3.26	1.063	1.907	.150		
	Gp2	103	3.02	1.111				
	Gp3	104	3.27	1.054				
Personal Health	Gp1	136	2.54	1.039	.044	.957		
	Gp2	103	2.52	.979				
	Gp3	104	2.57	1.130				
Interpersonal Relationships	Gp1	136	2.06	1.038	1.031	.358		
	Gp2	103	2.05	.984				
	Gp3	104	2.23	1.117				
Romantic Relationships	Gp1	136	2.15	1.079	2.893	.057		
	Gp2	103	2.24	1.287				
	Gp3	104	2.52	1.292				
Family Communication	Gp1	136	2.15	1.238	.847	.430		
	Gp2	103	2.03	1.115				
	Gp3	104	2.25	1.298				
Career Planning	Gp1	136	3.60	1.137	3.330*	.037	Gp1 > Gp2	.377
	Gp2	103	3.39	1.157			Gp1 > Gp3	.039
	Gp3	104	3.21	1.236			Gp2 > Gp3	.556
Financial Problems	Gp1	136	3.48	1.322	2.367	.095		
	Gp2	103	3.17	1.403				
	Gp3	104	3.13	1.419				
Total scale	Gp1	136	19.24	4.685	.922	.399		
	Gp2	103	18.43	4.978				
	Gp3	104	19.17	5.177				

Appendix 5-12: Analysis of difference in stress levels among groups in the post-test

Stress Scale	Group	N	Mean	Std. D	F	Sig.	Scheffe Post-Hoc	Sig.
School Work	Gp1	136	2.82	1.104	6.458	.002	Gp1 < Gp2	.731
	Gp2	103	2.93	1.087			Gp1 < Gp3	.002
	Gp3	104	3.33	1.170			Gp2 < Gp3	.041
Personal Health	Gp1	136	2.38	1.025	2.942	.054		
	Gp2	103	2.40	.922				
	Gp3	104	2.67	1.083				
Interpersonal Relationships	Gp1	136	1.63	.718	2.966	.053		
	Gp2	103	1.86	1.094				
	Gp3	104	1.88	.844				
Romantic Relationships	Gp1	136	1.94	1.045	10.993	.000	Gp1 < Gp2	.784
	Gp2	103	2.04	.949			Gp1 < Gp3	.000
	Gp3	104	2.57	1.213			Gp2 < Gp3	.002
Family Communication	Gp1	136	1.93	.971	1.494	.226		
	Gp2	103	2.04	1.009				
	Gp3	104	2.16	1.191				
Career Planning	Gp1	136	2.39	1.187	23.206	.000	Gp1 < Gp2	.001
	Gp2	103	2.97	1.184			Gp1 < Gp3	.000
	Gp3	104	3.41	1.120			Gp2 < Gp3	.025
Financial Problems	Gp1	136	1.87	1.121	32.126	.000	Gp1 < Gp2	.002
	Gp2	103	2.45	1.419			Gp1 < Gp3	.000
	Gp3	104	3.19	1.293			Gp2 < Gp3	.000
Total scale	Gp1	136	14.95	4.463	25.642	.000	Gp1 < Gp2	.015
	Gp2	103	16.69	4.572			Gp1 < Gp3	.000
	Gp3	104	19.21	4.710			Gp2 < Gp3	.000

**Appendix 5-13: Analysis of difference in stress levels between pre-test and post-test
in Group 2**

Stress Scale	Test	N	Mean	Std. D	t	Sig.
School Work	pre-test	103	3.02	1.111	.773	.441
	post-test	103	2.93	1.087		
	Reduction in stress level	103	0.09			
Personal Health	pre-test	103	2.52	.979	1.018	.311
	post-test	103	2.40	.922		
	Reduction in stress level	103	0.12			
Interpersonal Relationships	pre-test	103	2.05	.984	1.791	.076
	post-test	103	1.86	1.094		
	Reduction in stress level	103	0.19			
Romantic Relationships	pre-test	103	2.24	1.287	1.538	.127
	post-test	103	2.04	.949		
	Reduction in stress level	103	0.20			
Family Communication	pre-test	103	2.03	1.115	-.080	.936
	post-test	103	2.04	1.009		
	Reduction in stress level	103	-0.01			
Career Planning	pre-test	103	3.39	1.157	3.112	.002
	post-test	103	2.97	1.184		
	Reduction in stress level	103	0.42			
Financial Problems	pre-test	103	3.17	1.403	4.106	.000
	post-test	103	2.45	1.419		
	Reduction in stress level	103	0.72			
Total scale	pre-test	103	18.43	4.978	3.363	.001
	post-test	103	16.69	4.572		
	Reduction in stress level	103	1.74			

Appendix 5-14: Analysis of difference in stress levels between pre-test and post-test in Group 3

Stress Scale	Test	N	Mean	Std. D	t	Sig.
School Work	pre-test	104	3.27	1.054	-.410	.682
	post-test	104	3.33	1.170		
	Reduction in stress level	104	-0.06			
Personal Health	pre-test	104	2.57	1.130	-1.107	.271
	post-test	104	2.67	1.083		
	Reduction in stress level	104	-0.10			
Interpersonal Relationships	pre-test	104	2.23	1.117	3.049	.003
	post-test	104	1.88	.844		
	Reduction in stress level	104	0.35			
Romantic Relationships	pre-test	104	2.52	1.292	-.397	.692
	post-test	104	2.57	1.213		
	Reduction in stress level	104	-0.05			
Family Communication	pre-test	104	2.25	1.298	.746	.457
	post-test	104	2.16	1.191		
	Reduction in stress level	104	0.09			
Career Planning	pre-test	104	3.21	1.236	-1.638	.104
	post-test	104	3.41	1.120		
	Reduction in stress level	104	-0.20			
Financial Problems	pre-test	104	3.13	1.419	-.592	.555
	post-test	104	3.19	1.293		
	Reduction in stress level	104	-0.06			
Total scale	pre-test	104	19.17	5.177	-.098	.922
	post-test	104	19.21	4.710		
	Reduction in stress level	104	-0.04			

Appendix 5-15: The correlation between cognitive changes of acceptance of Zhuang Zi's main concepts and the measure of stress reduction in Group 2

		Reduction in School Work	Reduction in Personal Health	Reduction in Inter Personal Relation Ships	Reduction in Romantic Relation ships	Reduction in Family Communi Cation	Reduction in Career Planning	Reduction in Financial Problems	Reduction in Total Stress
Increase in	r-value	.021	.104	-.007	.136	.180	.062	.046	.137
Discarding	p-value	.834	.294	.943	.170	.070	.537	.642	.167
Prejudice									
Increase in	r-value	.176	-.075	-.024	.104	.152	.118	-.111	.071
Removing	p-value	.075	.452	.808	.294	.124	.234	.262	.477
Greed									
Increase in	r-value	.001	-.097	-.022	-.036	.030	.083	.191	.058
Forgoing	p-value	.994	.331	.826	.721	.762	.404	.054	.563
Demands									
Increase in	r-value	.104	-.048	-.027	.093	.169	.130	.054	.122
Total	p-value	.296	.632	.787	.352	.088	.190	.585	.220
Concepts									

Appendix 5-16: The correlation between cognitive changes of acceptance of Zhuang Zi's main concepts and the measure of stress reduction in Group 3

		Reduction in School Work	Reduction in Personal Health	Reduction in Inter Personal Relation Ships	Reduction in Romantic Relation ships	Reduction in Family Communi Cation	Reduction in Career Planning	Reduction in Financial Problems	Reduction in Total Stress
Increase in	r-value	.289**	-.150	.117	.001	.011	.010	-.001	.109
Discarding Prejudice	p-value	.003	.128	.238	.991	.908	.917	.994	.271
Increase in	r-value	.157	-.017	-.016	-.034	-.037	-.072	.037	.014
Removing Greed	p-value	.112	.861	.870	.732	.711	.467	.712	.890
Increase in	r-value	.070	-.013	-.085	.041	.044	-.115	-.081	-.037
Forgoing Demands	p-value	.481	.896	.391	.676	.657	.247	.413	.708
Increase in	r-value	.249*	-.084	-.009	.011	.017	-.103	-.036	.032
Total Concepts	p-value	.011	.394	.925	.908	.867	.300	.719	.750

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Appendix 5-17: The correlation between cognitive changes in acceptance of Zhuang Zi's sub-concepts and the measure of stress reduction in Group 1

		Stress Reduction							
		SW	PH	IR	RR	FC	CP	FP	TS
Increase in	r-value	.065	.085	.134	.066	.038	.119	.039	.142
Be selfless	p-value	.454	.323	.119	.443	.660	.168	.653	.100
Increase in	r-value	.025	.051	.167	.022	-.049	.107	.050	.096
Seek knowledge beyond language	p-value	.774	.555	.052	.800	.570	.213	.561	.264
Increase in	r-value	.033	.219*	.009	.142	.118	.178*	.068	.202*
Quit stubbornness	p-value	.701	.010	.921	.099	.172	.038	.429	.019
Increase in	r-value	-.071	-.005	.061	-.088	.005	.076	.083	.022
Treat others equally	p-value	.413	.950	.479	.307	.958	.378	.336	.795
Increase in	r-value	.081	.095	.112	-.039	-.034	.134	.240**	.167
Nourish health	p-value	.350	.274	.194	.655	.694	.119	.005	.052
Increase in	r-value	.097	.147	.115	.063	.143	.180*	.193*	.254**
Manage emotions	p-value	.261	.088	.183	.468	.098	.036	.025	.003
Increase in	r-value	-.094	.095	-.015	-.027	-.148	.031	.044	-.031
Purify the mind	p-value	.275	.273	.863	.757	.086	.718	.614	.719
Increase in	r-value	.071	.124	.000	.163	.002	.203*	.164	.202*
Free the spirit	p-value	.411	.152	.997	.057	.984	.018	.056	.018
Increase in	r-value	.003	-.071	.008	.103	.016	.174*	-.071	.049
Accept life's fate	p-value	.974	.408	.929	.233	.851	.042	.409	.570
Increase in	r-value	.078	.060	.096	.026	.033	.123	.069	.132
Be optimistic in adversity	p-value	.364	.491	.267	.763	.704	.153	.422	.127
Increase in	r-value	-.051	.005	.000	.051	-.121	.031	.004	-.022
Embrace flexibility	p-value	.559	.958	.996	.558	.162	.721	.962	.803
Increase in	r-value	.039	.066	.056	.059	.021	.097	-.009	.085
Accommodate to Nature	p-value	.655	.447	.518	.494	.807	.262	.913	.326
Increase in	r-value	.095	.077	.092	.079	.094	.140	.014	.156
Accept birth and death	p-value	.273	.370	.286	.359	.275	.104	.873	.070

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

PS: SW-School Work; PH-Personal Health; IR-Interpersonal Relationships; RR-Romantic Relationships; FC-Family Communication; CP-Career Planning; FP-Financial Problems; TS-Total Stress.

Appendix 5-18: The correlation between cognitive changes in acceptance of Zhuang Zi's sub-concepts and the measure of stress reduction in Group 2

		Stress Reduction							
		SW	PH	IR	RR	FC	CP	FP	TS
Increase in	r-value	.000	.124	.054	.110	.161	.045	-.011	.114
Be selfless	p-value	.997	.214	.590	.269	.105	.653	.915	.251
Increase in	r-value	-.001	.137	-.032	-.085	.021	-.047	-.077	-.030
Seek knowledge beyond language	p-value	.988	.168	.751	.391	.837	.636	.440	.767
Increase in	r-value	.056	.055	-.025	.088	.099	-.006	.047	.081
Quit stubbornness	p-value	.571	.579	.800	.377	.322	.955	.638	.417
Increase in	r-value	.007	-.017	-.015	.238*	.198*	.155	.150	.194*
Treat others equally	p-value	.942	.864	.879	.016	.045	.119	.131	.050
Increase in	r-value	.105	-.119	.090	.005	.092	.000	-.130	-.009
Nourish health	p-value	.293	.229	.366	.957	.354	.997	.189	.925
Increase in	r-value	.182	-.066	-.032	.140	.199*	.202*	-.079	.125
Manage emotions	p-value	.065	.511	.746	.158	.044	.041	.426	.207
Increase in	r-value	.139	.114	-.130	.117	.164	.114	-.024	.122
Purify the mind	p-value	.162	.253	.189	.239	.097	.250	.812	.220
Increase in	r-value	.133	-.110	-.004	.150	.021	.054	-.151	.008
Free the spirit	p-value	.180	.270	.972	.131	.831	.591	.128	.939
Increase in	r-value	-.040	.063	.149	.098	.043	.082	.267**	.185
Accept life's fate	p-value	.688	.526	.132	.323	.665	.408	.006	.062
Increase in	r-value	.052	-.154	-.050	-.147	-.014	.104	-.023	-.057
Be optimistic in adversity	p-value	.601	.120	.617	.138	.888	.294	.819	.565
Increase in	r-value	.014	-.122	-.067	-.141	.112	.115	.175	.041
Embrace flexibility	p-value	.887	.221	.501	.155	.260	.248	.077	.684
Increase in	r-value	.052	-.058	.017	.032	.050	.014	.153	.077
Accommodate to Nature	p-value	.600	.557	.866	.749	.617	.888	.123	.441
Increase in	r-value	-.052	-.108	-.156	-.031	-.052	.013	.145	-.036
Accept birth and death	p-value	.599	.278	.116	.753	.601	.896	.143	.722

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

PS: SW-School Work; PH-Personal Health; IR-Interpersonal Relationships; RR-Romantic Relationships; FC-Family Communication; CP-Career Planning; FP-Financial Problems; TS-Total Stress.

**Appendix 5-19: The correlation between cognitive changes in acceptance of
Zhuang Zi's sub-concepts and the measure of stress reduction in
Group 3**

		Stress Reduction							
		SW	PH	IR	RR	FC	CP	FP	TS
Increase in	r-value	.159	-.062	.041	.053	.187	.020	-.038	.122
Be selfless	p-value	.107	.533	.680	.591	.057	.837	.705	.218
Increase in	r-value	.190	-.077	.022	.007	-.108	.042	.128	.076
Seek knowledge beyond language	p-value	.054	.440	.824	.948	.276	.672	.196	.441
Increase in	r-value	.179	-.136	.083	-.114	.028	-.124	-.055	-.026
Quit stubbornness	p-value	.069	.168	.404	.251	.774	.210	.582	.794
Increase in	r-value	.169	-.091	.146	.053	-.106	.089	-.041	.083
Treat others equally	p-value	.087	.358	.139	.592	.284	.370	.682	.402
Increase in	r-value	.067	-.008	-.015	-.161	.025	-.128	-.142	-.106
Nourish health	p-value	.497	.933	.878	.104	.801	.195	.151	.283
Increase in	r-value	.104	.044	.031	-.015	-.001	-.003	.182	.104
Manage emotions	p-value	.295	.660	.758	.880	.989	.978	.065	.294
Increase in	r-value	.098	-.183	.006	-.037	-.068	.006	.178	.014
Purify the mind	p-value	.321	.063	.955	.707	.492	.956	.070	.887
Increase in	r-value	.175	.097	-.030	.079	-.067	-.007	-.026	.072
Free the spirit	p-value	.075	.325	.760	.428	.499	.942	.796	.465
Increase in	r-value	.135	.082	-.031	.160	-.047	.014	-.157	.053
Accept life's fate	p-value	.173	.408	.753	.104	.636	.891	.110	.592
Increase in	r-value	.077	.018	-.192	-.187	.077	-.166	.163	-.065
Be optimistic in adversity	p-value	.434	.856	.051	.057	.435	.092	.098	.514
Increase in	r-value	.035	.052	-.058	.067	-.043	-.096	-.116	-.048
Embrace flexibility	p-value	.721	.599	.557	.496	.665	.334	.242	.632
Increase in	r-value	-.042	.026	.041	.216*	.165	-.115	-.158	.037
Accommodate to Nature	p-value	.670	.794	.678	.028	.094	.246	.109	.708
Increase in	r-value	-.054	-.172	-.060	-.070	.014	-.058	-.098	-.144
Accept birth and death	p-value	.584	.081	.542	.481	.891	.558	.324	.145

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

PS: SW-School Work; PH-Personal Health; IR-Interpersonal Relationships; RR-Romantic Relationships;
FC-Family Communication; CP-Career Planning; FP-Financial Problems; TS-Total Stress.

Appendix 5-20: The analysis of variance for interpersonal behaviour in different groups

Scales	Group	N	Mean	Std. D	F	Sig.	Scheffe post-Hoc	Sig.
Aggressive Behaviour	Gp1	136	34.92	11.800	25.398	.000	Gp1 < Gp2	.000
	Gp2	103	44.59	16.911			Gp1 < Gp3	.000
	Gp3	104	48.41	17.327			Gp2 < Gp3	.198
Assertive Behaviour	Gp1	136	68.06	18.770	2.892	.057		
	Gp2	103	65.76	21.055				
	Gp3	104	61.69	21.709				
Passive Behaviour (Withdrawal)	Gp1	136	36.43	9.512	.069	.933		
	Gp2	103	36.10	9.430				
	Gp3	104	36.57	9.328				

Appendix 5-21: The correlation between post-test acceptance of Zhuang Zi's concepts and Aggressive Behaviour

Concept	Aggressive Behaviour		
	Gp 1	Gp 2	Gp 3
Discarding Prejudice	-.346 (p=.000)	-.135 (p=.174)	-.128 (p=.195)
Removing Greed	-.227 (p=.008)	-.039 (p=.693)	-.014 (p=.884)
Forgoing Demands	-.240 (p=.005)	-.017 (p=.864)	-.101 (p=.308)
Total concepts	-.303 (p=.000)	-.070 (p=.484)	-.106 (p=.285)

Appendix 5-22: The correlation between the post-test Zhuang Zi's concepts and assertive behaviour

Concept	Assertive Behaviour		
	Gp 1	Gp 2	Gp 3
Discarding Prejudice	.060 (p=.487)	.007 (p=.941)	.058 (p=.559)
Removing Greed	-.047 (p=.583)	.124 (p=.212)	.015 (p=.879)
Forgoing Demands	.026 (p=.767)	.251 (p=.011)	.026 (p=.797)
Total concepts	.008 (p=.924)	.176 (p=.076)	.043 (p=.668)

Appendix 5-23: The correlation between the post-test Zhuang Zi's concepts and passive behaviour

Concept	Passive Behaviour (Withdrawal)		
	Gp 1	Gp 2	Gp 3
Discarding Prejudice	-.098 (p=.259)	.073 (p=.462)	.012 (p=.902)
Removing Greed	.009 (p=.915)	-.072 (p=.472)	.076 (p=.440)
Forgoing Demands	-.054 (p=.535)	-.159 (p=.108)	.027 (p=.789)
Total concepts	-.048 (p=.580)	-.083 (p=.405)	.054 (p=.589)

Appendix 5-24: Analysis of stress reduction by gender for Group 2

S D	Gender	Group2			
		Mean	SD	t	Sig
S W	Male	.25	1.129	1.716	.089
	Female	-.14	1.146		
P H	Male	.12	1.209	-.091	.928
	Female	.14	1.338		
I R	Male	.23	1.095	.558	.578
	Female	.12	.981		
R R	Male	.57	1.345	3.394	.001
	Female	-.30	1.186		
F C	Male	.10	1.175	1.068	.288
	Female	-.16	1.308		
C P	Male	.57	1.430	1.319	.190
	Female	.21	1.245		
F P	Male	1.10	1.866	2.613	.010
	Female	.21	1.582		
T S	Male	2.93	5.653	2.824	.006
	Female	.07	4.125		

Group 2: 60 males and 43 females

SD=Stress decrease; SW=School Work; PH= Personal Health; IR=Interpersonal Relationships; RR= Romantic Relationships; FC= Family Communication; CP= Career Planning; FP= Financial Problems; TS=Total Stress

Appendix 5-25: Analysis of stress reduction by gender for Group 3

S D	Gender	Group3			
		Mean	SD	t	Sig
S W	Male	-.10	1.422	-.829	.409
	Female	.30	1.567		
P H	Male	-.13	1.018	-1.570	.125
	Female	.10	.316		
I R	Male	.37	1.218	.434	.665
	Female	.20	.919		
R R	Male	-.09	1.276	-.938	.350
	Female	.30	.675		
F C	Male	.04	1.200	-1.164	.247
	Female	.50	.972		
C P	Male	-.21	1.269	-.268	.789
	Female	-.10	1.197		
F P	Male	-.11	1.131	-1.054	.294
	Female	.30	1.418		
T S	Male	-.21	3.954	-1.372	.173
	Female	1.60	4.169		

Group 3: 94 males and 10 females

SD=Stress decrease; SW=School Work; PH= Personal Health; IR=Interpersonal Relationships; RR= Romantic Relationships; FC= Family Communication; CP= Career Planning; FP= Financial Problems; TS=Total Stress

Appendix 5-26: Analysis of stress reduction by department

【Group 1】

S D	Department	N	Mean	SD	F	Sig.	Scheffe Post-Hoc	Sig.
S W	Communication	43	-.05	1.272	3.886	.023	IfM > CE	.049
	Engineering Information	46	.70	1.489			MdM > CE	.063
	Management Marketing and Distribution Management	47	.66	1.449			IfM > MdM	.992
P H	Communication	43	.05	.872	.509	.602		
	Engineering Information	46	.28	1.205				
	Management Marketing and Distribution Management	47	.17	1.185				
I R	Communication	43	.23	1.088	1.290	.279		
	Engineering Information	46	.61	1.022				
	Management Marketing and Distribution Management	47	.43	1.193				
R R	Communication	43	-.05	1.174	1.690	.188		
	Engineering Information	46	.22	1.348				
	Management Marketing and Distribution Management	47	.43	1.118				
F C	Communication	43	-.12	1.384	2.117	.124		
	Engineering Information	46	.43	1.361				
	Management Marketing and Distribution Management	47	.32	1.235				

C P	Communication	43	.77	1.288	2.587	.079		
	Engineering							
	Information Management	46	1.33	1.898				
	Marketing and Distribution Management	47	1.51	1.545				
F P	Communication	43	1.56	1.563	.465	.629		
	Engineering							
	Information Management	46	1.48	1.773				
	Marketing and Distribution Management	47	1.79	1.459				
T S	Communication	43	2.40	4.568	4.624	.011	IfM > CE	.046
	Engineering							
	Information Management	46	5.04	5.517			MdM > CE	.024
	Marketing and Distribution Management	47	5.30	4.745			MdM > IfM	.970

【Group 2】

S D	Department	N	Mean	SD	F	Sig.	Scheffe Post-Hoc	Sig.
S W	Electronic Engineering	32	.16	1.110	1.562	.215		
	Industrial Management	36	.25	1.180				
	Health care Administration	34	-.21	1.095				
P H	Electronic Engineering	32	.16	1.139	.158	.854		
	Industrial Management	36	.19	1.508				
	Health care Administration	34	.03	1.114				
I R	Electronic	32	.16	1.019	.101	.904		

	Engineering							
	Industrial	36	.25	1.180				
	Management							
	Health care	34	.15	.958				
	Administration							
R R	Electronic	32	.44	1.343	7.403	.001	$E_2E < IdM$.810
	Engineering							
	Industrial	36	.64	1.376			$E_2E > HA$.018
	Management							
	Health care	34	-.47	1.080			$IdM > HA$.002
	Administration							
F C	Electronic	32	-.22	1.157	1.324	.271		
	Engineering							
	Industrial	36	.25	1.131				
	Management							
	Health care	34	-.09	1.401				
	Administration							
C P	Electronic	32	.53	1.218	.521	.596		
	Engineering							
	Industrial	36	.44	1.520				
	Management							
	Health care	34	.21	1.274				
	Administration							
F P	Electronic	32	.94	1.950	2.361	.100		
	Engineering							
	Industrial	36	1.03	1.812				
	Management							
	Health care	34	.18	1.566				
	Administration							
T S	Electronic	32	2.16	4.919	3.764	.027	$E_2E < IdM$.770
	Engineering							
	Industrial	36	3.06	6.122			$E_2E > HA$.177
	Management							
	Health care	34	-.21	3.968			$IdM > HA$.032
	Administration							

【Group 3】

S _D	Department	N	Mean	SD	F	Sig.	Scheffe Post-Hoc	Sig.
S _W	Mechanical Engineering	41	-.17	1.430	3.171	.046	ME > E ₁ E	.794
	Electrical Engineering	33	-.39	1.116			ME < MT	.173
	Materials and Textiles	30	.47	1.634			E ₁ E < MT	.057
P _H	Mechanical Engineering	41	-.27	.867	.974	.381		
	Electrical Engineering	33	.03	1.075				
	Materials and Textiles	30	-.03	.999				
I _R	Mechanical Engineering	41	.29	1.270	.191	.827		
	Electrical Engineering	33	.33	1.109				
	Materials and Textiles	30	.47	1.196				
R _R	Mechanical Engineering	41	.05	1.094	.318	.728		
	Electrical Engineering	33	-.18	1.424				
	Materials and Textiles	30	-.03	1.217				
F _C	Mechanical Engineering	41	.10	1.091	.716	.491		
	Electrical Engineering	33	-.09	1.355				
	Materials and Textiles	30	.27	1.112				
C _P	Mechanical Engineering	41	-.41	1.360	.985	.377		
	Electrical Engineering	33	-.09	1.308				
	Materials and Textiles	30	-.03	1.033				

FP	Mechanical Engineering	41	-.22	1.037	.786	.459
	Electrical Engineering	33	.12	.927		
	Materials and Textiles	30	-.07	1.507		
TS	Mechanical Engineering	41	-.63	3.865	1.615	.204
	Electrical Engineering	33	-.27	3.971		
	Materials and Textiles	30	1.03	4.098		

Appendix 5-27: Analysis of stress reduction by parental status

【Group 1】

S D	Parental status	N	Mean	SD	F	Sig.	Scheffe Post-Hoc	Sig.
S W	Both parents	95	.38	1.467	2.490	.087		
	Single parent	37	.46	1.346				
	Others	4	2.00	.816				
P H	Both parents	95	.22	1.122	.722	.488		
	Single parent	37	.00	1.054				
	Others	4	.50	1.000				
I R	Both parents	95	.41	1.180	.035	.966		
	Single parent	37	.46	.960				
	Others	4	.50	.577				
R R	Both parents	95	.28	1.226	.980	.378		
	Single parent	37	-.03	1.236				
	Others	4	.50	1.000				
F C	Both parents	95	.24	1.335	.453	.637		
	Single parent	37	.11	1.390				
	Others	4	.75	.957				
C P	Both parents	95	1.24	1.661	.067	.935		
	Single parent	37	1.16	1.573				
	Others	4	1.00	1.414				
F P	Both parents	95	1.56	1.555	.168	.846		
	Single parent	37	1.73	1.694				
	Others	4	1.75	2.062				
T S	Both parents	95	4.34	5.232	.678	.509		
	Single parent	37	3.89	4.766				
	Others	4	7.00	5.292				

【Group 2】

S D	Parental status	N	Mean	SD	F	Sig.	Scheffe Post-Hoc	Sig.
S W	Both parents	80	.15	1.057	2.264	.109		
	Single parent	20	-.30	1.342				
	Others	3	1.00	1.732				

P H	Both parents	80	.10	1.249	.091	.913		
	Single parent	20	.20	1.152				
	Others	3	.33	2.517				
I R	Both parents	80	.03	1.006	4.574	.013	Both < Single	.032
	Single parent	20	.70	.923			Both < Others	.265
	Others	3	1.00	1.732			Single < Others	.892
R R	Both parents	80	.13	1.372	.873	.421		
	Single parent	20	.40	1.188				
	Others	3	1.00	1.732				
F C	Both parents	80	-.06	1.194	4.387	.015	Both > Single	.992
	Single parent	20	-.10	1.210			Both < Others	.016
	Others	3	2.00	1.000			Single < Others	.021
C P	Both parents	80	.49	1.341	.696	.501		
	Single parent	20	.10	1.165				
	Others	3	.67	3.055				
F P	Both parents	80	.65	1.758	.570	.568		
	Single parent	20	.90	1.971				
	Others	3	1.67	2.082				
T S	Both parents	80	1.48	4.891	2.069	.132		
	Single parent	20	1.90	4.866				
	Others	3	7.67	13.317				

【Group 3】

S D	Parental status	N	Mean	SD	F	Sig.	Scheffe	Sig.
							Post-Hoc	
S W	Both parents	84	.10	1.332	3.034	.053		
	Single parent	19	-.63	1.707				
	Others	1	-2.00	.				
P H	Both parents	84	-.12	.999	.536	.587		
	Single parent	19	.00	.882				
	Others	1	-1.00	.				
I R	Both parents	84	.36	1.238	.045	.956		
	Single parent	19	.37	1.012				
	Others	1	.00	.				
R R	Both parents	84	-.10	1.228	1.953	.147		
	Single parent	19	.26	1.195				

	Others	1	-2.00	.		
F C	Both parents	84	.05	1.181	.821	.443
	Single parent	19	.32	1.204		
	Others	1	-1.00	.		
C P	Both parents	84	-.17	1.297	1.080	.343
	Single parent	19	-.26	1.046		
	Others	1	-2.00	.		
F P	Both parents	84	-.12	1.186	.951	.390
	Single parent	19	.21	1.032		
	Others	1	-1.00	.		
T S	Both parents	84	.00	4.081	2.664	.075
	Single parent	19	.26	3.124		
	Others	1	-9.00	.		

Post Hoc tests are not performed for all stress factors because at least one group has fewer than two cases.

Appendix 5-28: Analysis of stress reduction by residential status

S D	Residence	Group 1				Group2				Group3			
		Mean	SD	t	Sig	Mean	SD	t	Sig	Mean	SD	t	Sig
S W	Home	.40	1.408	-1.182	.239	.03	1.088	-1.496	.138	-.04	1.436	.434	.665
	Outside	.92	1.730			.60	1.578			-.29	1.496		
P H	Home	.20	1.059	1.109	.269	.12	1.258	-.194	.846	-.11	.999	-.296	.768
	Outside	-.17	1.467			.20	1.317			.00	.577		
I R	Home	.45	1.107	.851	.396	.13	1.024	-1.655	.101	.37	1.210	.488	.626
	Outside	.17	1.115			.70	1.160			.14	.900		
R R	Home	.25	1.194	1.355	.178	.17	1.316	-.731	.467	-.05	1.253	-.106	.916
	Outside	-.25	1.485			.50	1.650			.00	1.000		
F C	Home	.24	1.327	.597	.551	-.03	1.137	-.363	.724	.09	1.109	.117	.911
	Outside	.00	1.477			.20	1.989			.00	2.082		
C P	Home	1.21	1.594	-.082	.935	.44	1.306	.530	.597	-.21	1.249	-.128	.898
	Outside	1.25	1.960			.20	1.874			-.14	1.464		
F P	Home	1.59	1.572	-.505	.614	.59	1.771	-2.406	.018	-.06	1.189	.178	.859
	Outside	1.83	1.899			2.00	1.633			-.14	.690		
T S	Home	4.35	4.899	.386	.700	1.45	4.817	-1.705	.091	-.01	4.063	.267	.790
	Outside	3.75	7.098			4.40	8.113			-.43	2.992		

Group 1: 124 live at home; 12 live outside

Group 2: 93 live at home; 10 live outside

Group 3: 97 live at home; 7 live outside