

THE UNIVERSITY OF HULL

**THE EFFECT OF PERSONALITY ON THE
ADJUSTMENT TO RESIDENTIAL CARE FOR THOSE
WITH DEMENTIA**

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the Degree of Doctor of Clinical Psychology

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By

Antonia Clare Hilton (BSc.)

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ABSTRACT

It has been suggested that personality may affect the adjustment to residential care for those with dementia. However, many theorists have stated that personality changes due to dementia. Therefore this study investigates personality modes (namely autonomy and sociotropy) believed to be stable over time, irrespective of dementia. The personality modes are predicted to negatively affect adjusting to residential care. However the measure developed to investigate these modes (Sociotropy-Autonomy Scales) has not been validated with an older adult (dementia) population. The present aims of the study are: 1) Examine the SAS in relation to an older adult (dementia) population 2) To explore the stability of the personality modes 3) to investigate the affect of personality on adjustment to residential care. **PARTICIPANTS AND MEASURES** – An interview with 63 families of residents and key-workers, was followed by a two-hour direct observation. Measures used include: SAS, CAPE-CAS/BRS, BASOLL-mood, Cornell, RAID, CBS and CBOS. **RESULTS** – The SAS was able to discriminate personality modes in an older adult (dementia) population. The autonomous and sociotropic modes showed stability, irrespective of dementia. There was an association found between personality modes and adjustment (in terms of problematic behaviour and mood problems). **CONCLUSION** – There are aspects of personality that are unaffected by dementia and that influence the difficulty of adjusting to residential care.

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CHAPTER ONE

INTRODUCTION AND LITERATURE REVIEW

England is an aging society – since the 1930's the number of people aged 65 and over has more than doubled and today a fifth of the population is over the age of 65. It is estimated that between 1995 and 2025, the number of people over the age of 80 will increase by almost half and the number of people over 90 will double. In terms of cost, it is estimated that the NHS spends around 40% of its budget - £10 billion - on people over the age of 65 in 1998/99 and in the same year, social service spent 50 % of its budget (£5.2 billion) on the over 65's (National Service Framework (NSF), 2001). Old age and its related problems are expensive and will be increasingly so; efforts to understand and alleviate the problems will positively affect the individual's life style and the national budget.

One of the disabilities associated with older age is dementia. This increases as the population increases and adds greatly to the NHS and social service budget. It is estimated that 5% of people over the age of 65 years have dementia and this increases to 20% for those over 80 years old, (Woods, 1996). Dementia is a degenerative disorder and is associated with a number of difficulties, which increase as the dementia advances. These include memory failure, decrease in efficiency of everyday life tasks, deterioration of intellect, reasoning and aspects of personality and deterioration in language (Lezak, 1995). In addition to this, there is also the presence of Behaviour and Psychological Symptoms of Dementia (BPSD). BPSD was first defined by Finkel et al., (1997) who attempted to find a consensus definition for the descriptions used for the

range of behaviours that staff, caring for people with dementia, have difficulty managing. Their suggested definition of BPSD is:

“Signs and symptoms of disturbed perception, thought content, mood and behaviour
that frequently occur in patients with dementia”

(Finkel et al., 1997).

BPSD have been found to be extremely difficult for both the individual and the carer, as the presentation of the individual with dementia is seen as far removed from the individual before the dementia was present (Coen et al, 1997). This is increasingly difficult for the carer to cope with and is found to be the main reason for institutionalisation (Bianchetti et al, 1995). However, moving into residential care does not alleviate the presence of BPSD, in fact, in most cases they tend to increase (Lopez et al, 1999). For older adults without dementia moving into residential care, there is seen to be an increase in behaviours such as withdrawal, agitation and noisy conduct (Everitt et al, 1991). However, for those with dementia, the level of behaviour disturbance has been found to be consistently greater (Nasman et al, 1993). The presence of higher levels of BPSD in those with dementia not only indicates that the individual is having difficulty, but have also been found to cause distress in staff, resulting in lower levels of job satisfaction, high turn-over of staff and more staff absences (Everitt et al, 1991; Dougherty et al, 1992).

It is evident then that the presence of BPSD in residential care results in a number of difficulties, not only for the individual themselves, but also for the systems around the individual. The reason for the presence of BPSD in residential care has been

investigated over many years and the perspectives investigating the causes have changed radically. This involves a shift from simple biomedical explanations to those that suggest that BPSD are a form of communication of need – which requires appropriate response from the systems around the individual, namely, a person centred approach. This shift will be explored in section 1.1, which follows.

1.1 THE SHIFT FROM BIOMEDICAL EXPLANATIONS OF BPSD, TO BPSD AS A FORM OF COMMUNICATION

1.1.1 Biomedical Perspectives

These perspectives emphasise the correlation between the problematic behaviours presentation in dementia and the progression of the disease (Kalcinowski & Whall, 1996). Swearer (1994) reviewed the literature pertaining to dementia. From this, he concluded that disease severity is frequently associated with the development of behavioural disturbance. This has been depicted by a number of studies, for example, Petry, Cummings & Hill (1988) who found that individuals with similar severity of dementia demonstrated commonality of passivity, coarseness of affect and decreased spontaneity. Sungaila & Crockett (1993) associated behaviour in dementia to brain-area pathology. They state that demented patients with frontal damage tend to be less inhibited, hostile and restless. Similarly, DeLeon, Pretegal, & Gurland, (1984) investigated a sub-group of Alzheimer's patients who wandered, and correlated this with significantly poorer performance on tests of parietal function. Swearer, et al., (1996) investigated behaviour in Alzheimer's Disease and the disease characteristics of the behaviour presentation. They stated that the majority of patients with Alzheimer's

disease (AD) develop difficult behaviour presentation at some point in the course of the disease and this was associated with disease severity. They investigated the disease severity and the presence of behaviour disturbances in 30 mild/moderately demented AD patients and concluded that increased disease severity is a significant risk factor for the development of difficult behaviour in AD patients.

These are just a few examples of studies to date, which have investigated the relationship between the dementing illness and BPSD. What these investigations imply is that BPSD are a result of deterioration of brain tissue.

1.1.2 Person-Centred Approaches

However, as mentioned, in the last decade there has been a shift in this approach to BPSD, from the biomedical formulation to a person-centred formulation and Kitwood (1990, 1993, 1995, 1997) played a key role in this shift. He argues that the clinical presentation of dementia is not simply a manifestation of neurological impairment. He poses the question that, if this were true, why then do people with the same degenerative disorders often show widely different presentations in behaviour? He postulates:

“If we follow any person’s dementing illness carefully, observing its course in the realities of everyday life, it is extremely difficult to conclude that we are simply witnessing the consequence of a process of degeneration in nervous tissue”.

(Kitwood, 1995)

Kitwood (1995) supports his argument by citing phenomena associated with dementia, which are not explained by the biomedical perspective. Firstly, he points out that some individuals' with dementia seem to deteriorate faster than they should with a progressive degeneration. Secondly, he states that, in some cases, the individual with dementia can exhibit "stabilisation" or "rementing", which is the virtual arrest of deterioration of the dementing illness. The biomedical perspective explains neither faster deterioration nor rementing. In addition, he states that there is a weak correlation between measures of dementia and the extent of neuropathology (Kitwood, 1997).

However, he does not discount the influence of neurological deterioration, but instead suggests that dementia is not only a brain event, but is also a consequence of the persons own psychological experience of this event:

"The problem... is not simply that of the damaged brain cells, but also of damage to the psychological self. Dementia is envisaged as a break in cohesive awareness, a failure of the process of consistent symbolisation, so the person has lost his or her bearings in the world and is invaded by feelings from within."

Kitwood (1990)

He suggests that the individual behaviour is a communication of feelings and needs – the individual being a creative agent attempting to understand and define the situation, using the inner resources and he states that BPSD may increase if the attempt at communication is not being fully understood.

To exemplify this, it is useful here to consider the work of Bion (1962). Bion's work involved looking at mother-child relationships, however his concepts examined primitive communication systems and are therefore relevant in relation to older adults with dementia (Davenhill, 1998). Bion suggested that in order to respond to a baby's distress, the adult takes in and transforms the distress so that the baby senses that its needs have been understood and the distress is alleviated. If the infant does not feel that the mother is able to transform the distress, this can result in the infant making frantic and violent attempts to be understood by the mother, or, alternatively, giving up in despair. In relation to dementia, if the brain deterioration has left the individual functioning with a break in cohesive awareness, the communication to staff may be hard to understand and it may rely on staff understanding the distress conveyed through more primitive communication, and responding to it appropriately. The sense that the individual is not being understood may lead to frantic behaviour to get the message across, or giving up in despair.

Stokes (1995) also argues the case that BPSD is an act of communication, stating:

“We cannot allow the destruction of language, memory and reasoning to be an insurmountable barrier to understanding who people with dementia are and why they do what they do....If we make contact with the person behind the barrier, we are offered the opportunity to stand the pre-valuing opinion of dementia on its head and assert that much behaviour in dementia is not meaningless, but meaningful”.

He goes on to suggest that the behaviour presentation of those with dementia is driven by the person within, their thoughts, feelings and perceptions, and it cannot be

presumed that these thoughts and perceptions of that person are known, but attempts can be made to get closer to the person by observing, listening and interpreting (Stokes, 2000). He concludes that a person with dementia remains an active agent, a person who initiates actions and communicates needs, albeit in a reality that is unknown.

It is clear that modern emphases have shifted from the view that behaviour is totally a result of neurological deterioration and more towards the idea that it may also be a form of communication whereby the individual, whose cohesive awareness has broken down, has an altered form of communication, which needs to be understood. Understanding what the person is attempting to communicate, why the expression takes the form of behaviour and why the expression (BPSD) increases when a person is transferred to residential care, remains an area of further enquiry.

The move into residential care is thought to result in distress for older people because they are leaving a familiar environment, which they have shaped around themselves and their needs, and are moving into an environment which is unknown (Kalcinowski & Whall, 1996), especially as reality now becomes increasingly indefinite (Stokes, 2000). During life, these individuals will seek, and be found in environments congruent to their needs (Kahana, 1975). Should incongruence arise, there would be some effort on the part of the individual to cope with and adjust to this (Kahana, Kahana & Riley, 1989). However, the adjustment capacity of people suffering from dementia is likely to be diminished (Lawton, 1977). Therefore when incongruence does arise between the individual and the environment (which is extremely likely due to the fact that every part of the residential care environment is not, and cannot, be shaped to the individual) attempts to adjust, are limited by diminished adjustment capacity. This may result in

communication of the difficulty of adjustment through BPSD. This view is further supported by researchers investigating adjustment to residential care, using the presence of behaviour difficulties and mood problems (i.e. BPSD) as the measure of poor adjustment (Timko & Moos, 1989; Johnson et al, 1998 and Cicirelli, 1987).

Therefore, far from BPSD being a direct consequence of neurological impairment, it is suggested that these could actually be expressions of poor adjustment to residential care, which may in turn explain the rise in the presence of BPSD. Furthermore, if the response to expression of difficulty in adjustment is inappropriate, this is likely to result in learned helplessness, depression and “excess disability” (Kahana, Kahana & Riley, 1989). “Excess disability” refers to the extra problems and disabilities that are not a direct consequence of neurological damage, but are consequences of the person’s experience of the disease or the malignant social environment (Kitwood, 1997).

Therefore, it seems probable that the BPSD in residential care are a form of communication of difficult adjustment, arising from the individual, and are due to the individual’s needs not being met. This focus on the individual not only exists in the literature and services for older adults, but it is also evident in government policy to date in relation to services for the older population.

1.1.3: Policy: National Service Framework (NSF) Older Adults

There has been an increased awareness of the needs of older adults within society over the last decade and this has resulted in a push for changes of policy in relation to older adults. In recent decades, there has emerged an overdue and new found respect for

older adults and the attitude that often wrote people off as “elderly” has now given way to one demanding that older people are seen as having individual needs (NSF, 2001).

The need for a National Service Framework for older people was triggered by the concerns about widespread infringement of dignity and unfair discrimination in older people’s access to care. This is encapsulated in two main standards:

- a) Standard 1: Rooting out age discrimination: NHS service will be provided regardless of age, on the basis of clinical need alone.**
- b) Standard 2: Person-centred care: NHS and social services treat older people as individuals and enable them to make choices about their own care.**

Of particular relevance to the present thesis, is the concept of person-centred care. The NSF provides guidelines that older people, and their support networks, should receive person-centred care and services which respect them as individuals and which are arranged around their unique and individual needs. This therefore requires service providers to:

- Listen to older people.
- Respect their dignity and privacy.
- Recognise individual differences and specific needs, including cultural and religious.
- Enable older people to make informed choices, involving them in all decisions about their need and care.
- Provide co-ordinated and integrated service responses.

- Involve and support carers whenever necessary.

The recent policy in relation to older adults therefore reflects the need to use a person-centred approach to care.

1.1.4 Rationale

The aging population is increasing and, consequentially, the population of people with dementia will rise. It has been shown that the behavioural and psychological symptoms of dementia are the main reason for movement into residential care and that this movement itself contributes to an increase in BPSD. To reduce the progression of BPSD, staff have to understand the perspective of the individual, who may be having difficulty adjusting to residential care, but may not be able to express this. Not only have these to be understood, they have to respond appropriately to the individual's needs. Additionally, the family themselves have to cope with this increase in BPSD, which was the main reason for institutionalisation. They need to hold onto their image of their relative, which may seem far removed from the person who is in residential care.

This extensive effect of BPSD in residential care on the individual, staff and families, highlights the need to investigate the reasons for BPSD, which may guide responses and go some way towards focusing on the individual differences and presentations (Shomaker, 1987).

However, it is easy to say that the research should concentrate on the individual and the systems around them, but this, in itself is a vast area. Not only do the investigators have to decide whether to investigate factors within the individual, or systems around the individual, but they also have to decide what aspects of the individual or the systems they wish to concentrate on. This is evident within the research to date. For example, research investigating the systems, has looked at issues around the physical environment, staff and family support (Moos & Lemke, 1985; Lawton, 1977; Moore et al, 1986; Archibald & Murphy 1999). Research examining the individual has focused on the values and preferences of the individual, phenomenological factors and personality (Kane & Degenholtz, 1997; Carpenter et al, 2000; Hagberg, Hagberg & Saveman, 2002; Magai et al, 1997).

1.2 SYSTEMS AROUND THE INDIVIDUAL

1.2.1: Physical Environment

As demonstrated above, there is a need to investigate the physical environment of the residential home, since incongruence between this and the individual's personal needs could result in the presence of BPSD (Kahana et al., 1989; Kahana, 1975). Many researchers have found that the physical and architectural features of group living settings can influence behaviour and well-being of older adults in residential care (Lawton, 1977; Moore et al, 1986; Moos & Lemke, 1985). An example of this is Brennan et al (1988), who investigated the effect the physical environment on the older adult adjustment to residential care and found that environmental such as supportive features, decoration and layout did hold some importance for residents. They did

conclude, however, that although environments should be facilitative, they should not provide too many supportive features, as this may undermine independent functioning.

The limitations of concentrating solely on the physical environment are that, although the physical surroundings are important at some level, other factors have been shown to hold greater importance to the residents (Kolanowski & Whall, 1996). For example, intervention studies have shown that environmental factors rated by the residents as supporting adjustment to residential care, were primarily, the behaviour of the care-takers, secondly, their knowledge-base and finally, the physical environment (Burgener et al, 1992). Cohen-Mansfield & Marx (1992) found a positive correlation between disturbing behaviours and lack of intimacy of the environment. Dabbs (1999) states that existing research strongly suggests that it is the social, interpersonal and emotional aspects of the care environment – rather than the physical aspects – that are most important for people with dementia.

Therefore, it seems important to investigate the individual's adjustment to their environment more in terms of the systems that provide care and intimacy, in particular the staff and family, rather than the physical environment per se.

1.2.2 Services and Family

Archibald & Murphy (1999) state that since dementia is a disability affecting all the systems around the individual, such as the staff and the family, the person-centred approach needs to be applied to all the above, not just the individual.

Studies which have investigated staff in relation to person-centred care, have found that exposure to BPSD results in distress in the staff and decreased job satisfaction (Cole, Scott & Skelton-Robertson, 2000). This will have a negative impact on the relationship between the person with dementia and the staff member, thus making it increasingly difficult for staff to understand the need that is being communicated, which, in turn, could increase frustration and frequency of behavioural and psychological difficulties for the person with dementia. Investigators have explored ways of decreasing these difficulties for staff. For example, Moniz-Cook et al (1998) investigated whether brief in-service staff training could reduce the presence of behavioural problems within residential care. They used a sample of 83 residential care staff within this study and compared the incidence and management of problematic behaviour with the control home. They found that, three months after training, although the incidence of problematic behaviour did not change, staff in the experimental homes reported a significant improvement in their management of problematic behaviour, compared to the control home. This could be understood as the staff learning to communicate with a person showing problematic behaviour and therefore this behaviour may be seen as less of a problem following training. There may not have been enough time to see dramatic changes in behaviour.

Athlin & Norberg (1987) suggested that having a deep knowledge of the individual helps staff to interpret patient's behaviour. They investigated this by looking at feeding in severely demented patients. They used a "primary nursing" structure with four nurses and described the development of the interaction between severely demented patients and their caregivers during feeding. The results showed that after 14 meals the staff felt more certain about how to interpret the patient's behaviour and understand their

communication. They also noted a pattern in the interaction between the patient with dementia and the caregiver. This started with the caregiver focusing on improving the techniques of feeding, and later went on to focus on the relationship with the patient. Although this study looked solely at feeding, it exemplifies the need to spend time with the individual, increasing their knowledge of the individual, to interpret their communication and respond appropriately to them.

Families remain in the frame when a person moves into residential care (Orbell, 1996) and caregivers perception of behaviour presentation is important in determining their strain (Agar et al, 1997). This may ultimately affect the families capacity either to see behaviour presentation as a form of communication, or to interpret this communication (Archibald, 1999). Research has suggested that involving the family in the activities of the individual with dementia, within the residential setting, will help towards decreasing the strain and increasing their ability to view BPSD as possible sources of communication (Archibald & Murphey, 1999).

What does seem apparent is that the reason for the staff and family stress is the difficult psychological and behavioural presentations of the resident and, when some time is taken to understand these, this seems to result in increased understanding, better management and decreased levels of stress for the systems around the individual with dementia. What seems intrinsic in this is that, the more understood about the person (with dementia), the more the communication from this person can be comprehended and ultimately responded to appropriately.

1.3 WITHIN THE INDIVIDUAL

1.3.1 Values and preferences

There are a number of aspects within the individual which could be investigated to decipher individual's needs with residential care. The focus of research has been around values and preference of the individual in residential care. Values are defined as:

“Concepts used to explain how and why various realities matter...they disclose features of our everyday world to which we attach special importance...positive values are balanced by disvalues. Disvalues express what we consider understandable, harmful or unworthy about particular phenomena. They identify realities that we resist or strive to avoid”

(Kane & Degenholtz, 1997, pg 22)

Preferences are thought to be positives options among one or more choices. Most individuals have a large number of preferences, some more important than others, shaping their daily lives (Degenholtz & Kane, 1996). Some preferences are relatively fixed (i.e. always preferring a particular type of food) other are transient (i.e. today I will wear a skirt instead of trousers). Preferences flow directly from values, i.e. “because I value privacy, I prefer my door to be locked”.

A number of studies have shown that values and preferences of individuals will affect how they adapt to new environments, particularly residential care (Kane & Degenholtz, 1996; Brennan et al, 1988; McCullough & Wilson, 1995). Because of this, studies have concentrated on developing a scale to measure the values and preferences of older

adults. For example, Carpenter et al (2000) suggested that psychosocial preferences are essential components in providing respectful, individualised care and they explored aspects of everyday life older people consider important, with the aim of developing a scale to measure these preferences to aid adjustment to residential care. The results of the study showed two overarching dimensions and six domains that were important preferences, and suggested implications for a scale development as well as clinical intervention. However, the sample size of the study was small (20 participants) and it was a convenience sample of highly educated, active researchers and clinicians. Brennan et al (1988) attempted to develop a preferences scale which was completed by the resident themselves about their preferences regarding the residential environment. However, they concluded it is difficult to develop a standardised scale for this type of information because the preferences of the older adults are very diverse, emphasizing the individual nature of preferences themselves. So, although there have been studies which have noted the importance of values and preferences, an attempt to develop a measuring scale has been found to be difficult and those developing a scale used a small, biased sample.

In addition, in a number of studies to date it has been stated that that preferences flow directly from values, and values are closely related to personality (Degenholtz & Kane, 1996). For example, if a person has an introverted personality, they may choose to withdraw from social situations, valuing privacy and preferring to have the bedroom door locked within a care home. It could therefore be argued that, if preferences flow from values which are intrinsically linked to personality, then it would seem useful to concentrate on the individual personality, as the other aspects within the individual are derived from this and these aspects appear to be more diverse and susceptible to change.

1.4 PERSONALITY

Personality is an area comparatively under-researched in literature and the results from the research in this area have been inconsistent (Petry et al, 1988). Herein lies the problem with investigating personality in relation to behaviour presentation in dementia. The bio-medical definition of dementia (or at least some sub-types of dementia) actually uses the description of “changed personality” as one of the diagnostic criteria taken during clinical history (Lishman, 1998). It is also used in definition of dementia when referring to the clinical syndrome. This is used more widely and defined very simply as:

“An acquired global impairment of intellect, memory and *personality* but without the impairment of consciousness”

Lishman (1998)

This therefore makes it difficult to argue that personality affects a person’s adjustment to residential care because, according the biomedical definition, neurological damage due to dementia is evidenced by personality change.

Within the literature pertaining to dementia, common personality descriptors that make up “changed personality” are: change in impulses, motivation, social judgement, impatience and over-familiarity (Rubin et al, 1987; Sungaila & Grockett, 1993; Lezak, 1995; & Moss, Abert & Kemper, 1992). These changes in personality in dementia are thought to be consistent with changes seen in Organic Personality Change (Lishman, 1998). This was first documented in the 1840’s with the case of Phineas Gage. He was pressing dynamite into a rock, using a tamping rod, when the charge suddenly exploded

causing the rod to shoot through his frontal lobe and through the top of the skull (for a precise description see Damasio et al., 1994). He made a rapid physical recovery. The physician however, reported that his patient was radically changed as a person. He was noted to be impatient, socially inappropriate, impulsive and his motivation had changed (Solms & Turnbull., 2002). From countless further investigations to date, similar personality changes are seen when damage occurs in frontal lobe area of the brain. Areas typically affected are impulses, motivation, social judgment, impatience, over-familiarity, tactlessness and childish excitement (Lishman, 1998).

It appears that in some ways the issue of cause and effect is circular whereby it is suggested that the behaviour presentation of individuals with dementia and organic personality change are similar, therefore behaviour change and, by implication, personality change is due to organic damage. With dementia, deterioration of manners may be the earliest sign of diminished awareness of needs and feelings of others. Social blunders may disclose the problem such as stealing or disinhibited behaviour that is out of character for the individual (Lishman, 1998). These changes are taken as “signs of dementia” and in this way add to the view that dementia can be diagnosed by reports of “change in personality”.

It seems surprisingly crude that a few descriptors of personality are used to conclude that a global change in personality has occurred due to dementia. This approach appears to ignore the wide literature and theory pertaining to personality and its relationship to behaviour. In addition, some theories have suggested that rather than brain degeneration actually changing personality per se, it accentuates pre-existing emotional tendencies and traits (Lee et al., 1993). Overall, it is fair to say that in particular sub-types of

dementia (such as fronto-temporal dementia) there may be changes in some aspects of behaviour, or in control systems which are described as personality changes due to their particular affect on social behaviour.

This study will however argue that, for a wide range of people with dementia, there are other aspects of personality present at birth and remaining unchanged throughout life, regardless of neurological deterioration in dementia. To support this argument, the research must concentrate on aspects of personality located in areas of the brain, relatively unaffected by dementia. It is evident from dementia literature that, although there is specific pathology for different types of dementia, there will ultimately be deterioration throughout the neo-cortex (Lezak, 1995, Lishman, 1998). What is apparent however is that the phylogenetically ancient brain structures which lie deep in the middle and upper zones of the brain stem, remain preserved well into the dementing illness (Banich, 1998). Therefore, it seems inevitable that this research should concentrate on aspects of personality associated with these older brain structures.

We shall return to this argument later. However, in the next section we will examine literature and theories of personality which have dominated recent thinking i.e. the basic factors that are thought to constitute 'personality'. The former will be examined to exemplify the sheer wealth of personality literature that goes far beyond the few descriptors noted regarding a 'change of personality' with dementia. The latter will be examined to understand why this research has not concentrated on these factors, if they are thought to be the constituents of personality and also to explain why the research to date has been inconclusive about the effect of personality on adjustment to residential care, in people with dementia.

1.4.1 Personality Literature

The theories of personality that have developed over the years are thought to fall into several perspectives and these perspectives represent how best to think about human beings. They are:

- Dispositional: Relatively stable qualities displayed in diverse settings.
- Biological: Personality is genetically based.
- Psychoanalytic: Personality is a set of internal forces that compete and conflict with one another.
- Neoanalytic: The ego and it's development (and therefore derived from the psychoanalytic perspective) and the importance of social relationships in personality and its functioning.
- Learning: Human behaviour changes as a result of experience.
- Phenomenon: Subjective experience is unique, self-determination is an important element in the perspective.
- Cog self-regulation: Cognitive processes are important underpinnings of personality.

(Carver & Scheier, 1996)

These perspectives each reflect work of several theorist and they become a guide for specific theories. The perspectives broad range and theoretical positions are encompassed within each perspective. The breadth of this literature cannot be covered here, but is outlined by Carver & Scheier, (1996). Here the perspective that is perhaps most relevant to this thesis will be examined.

The Dispositional Perspective is seen as relevant because it encapsulates both the theories which examine constituents of personality and those aspects of personality associated with older brain structures. The most common approach to the dispositional perspective emphasises the mere existence of personality factors and focuses primarily on trying to measure and catalogue these, to obtain a clearer understanding of dimensions most important to personality (i.e. the “trait and type” approach). Other approaches look at the basic emotions and needs that underlie personality. These are thought to be the elements that are associated with the older brain structures.

1.4.2 Type / Trait

Type is usually regarded as a category which is distinct and discontinuous, a person is either one or the other. In contrast, trait assumes that people differ on a continuous level, in the levels of personality characteristics that they have. In general, the type theory has fallen out of favour in personality literature and theorists have developed and expanded on trait theory, which has focused on answering the thorny question: What are the basic traits of personality? This has proved to be difficult, with some authors describing 16 factors (Cattell 1965, 1978) and other moving for the typology theory. An example of the latter is Eysenck (1970, 1975) – who suggested that there are two “supertraits” underlying the dimensions of personality: introversion – extraversion and emotionality-stability. Gough (1968) noted that there are aspects of personality common to all culture and societies and described these as ‘folk concepts’. However, as theories evolved, there developed a strong consensus that personality consists of five superordinate factors (often referred to as the big five) – (Goldberg, 1981).

The evidence to support the five-factor model has accumulated over the last forty years (see Digman, 1990 for a full history). However, there is still disagreement about what these five factors actually are (McCrae & Costa, 1987). This disagreement occurs firstly in the labelling of the factor, and secondly in exactly what the factor consists of. Having said this, the five factors generally agreed upon are as follows:

1. **Extraversion:** Although there are varying views of what constitutes this factor, some important characteristics include: assertiveness, an open expression of impulses, usually thought to incorporate a sense of sociability.
2. **Agreeableness:** Not just warm and likeable versus cold but incorporates a sort of docile compliance and a sense of nurturance and emotional supportiveness.
3. **Conscientiousness:** This label does not fully reflect it's qualities which include planning, persistence, and purposeful striving towards a goal. Other suggested names are: will, responsibility and constraint.
4. **Neuroticism:** There is the most agreement about this factor. At the heart of this construct is the notion of anxiety and emotion.
5. **Intellect:** Early on this factor was thought to be consistent with things to do with intelligence and therefore the label 'intellect' stuck.

These five-factors have emerged as superordinate traits that incorporate narrower traits within them. McCrae and Costa (1987) developed the NEO-Personality Inventory (NEO-PI), to measure the five personality traits. Each of the traits are represented by measures of six narrower traits and the scores are combined to make the one trait.

This does raise the question that, if these are recognised to be the basic five traits of personality, why not investigate these five traits in relation to personality and adjustment to residential care?

1.4.3: The case against the five factor model of personality in older people with dementia

Kenrick & Stringfield, (1980) investigated the relationship between the five traits and behaviours, with the expectation that there would be a relationship between the two – for example those with an introverted personality would tend to avoid larger social situations whereas those with extraverted personalities would actively seek these situations (Thorne, 1987). They asked 30 participants to report their trait characteristics and then to report how consistent they were on those dimensions. They found that the correlation between the five traits and behaviour was very low and therefore it was difficult to argue that behaviour could be predicted from a person's traits. There were many ideas put forward as the reason for this: one of the most powerful arguments was that personality traits and situations interact with each other to produce behaviour (Pervin, 1985). For example, some situations permit the easy expression of personality (i.e. a college campus in late afternoon) whereas other situations force behaviour into specific channels – preventing expression of personality (i.e. an army boot camp) –

(Mischel, 1977). Therefore, it is difficult to predict a person will behave in one way or another, due to their personality traits, because the situation contributes to the behaviour.

In addition personality traits, have been investigated to determine whether they are stable over time, particularly with dementia, to address the question of whether personality does change as a result of dementia.

Siegler et al (1994) investigated 26 patients with Alzheimer's Disease (AD), asking caregiver to report of both current and pre-morbid personality patterns, using the NEO-PI. Their results showed that, after a diagnosis of AD, the patients were rated as significantly more neurotic, less extraverted, less open and less conscientious. They reported no change in the personality domain of agreeableness. Therefore, they concluded that personality traits did show change in the presence of dementia.

Chatterjee et al (1992) also investigated the stability of the five traits with 38 Alzheimer's patients. The caregiver of the patients were asked to complete two NEO-PI, once to describe the patient as he/she was prior to the onset of the illness and once to describe the patient at the present time. They found that the caregiver reported a consistent and pervasive change in neuroticism, extroversion, openness and agreeableness and these changes occurred irrespective of the patient's pre-morbid personality. They concluded that these personality factors change with the presence of dementia.

One way to explain why the five factors do not show consistency with people with dementia is by examining the neurological deterioration which occurs with dementia, particularly moderate to severe dementia. The neurological deterioration in dementia, as noted, affects the majority of the neo-cortex, which, in itself (particularly the frontal lobes) is believed to be the anatomical structures associated with the personality traits (Lezak, 1995; Lishman, 1998). Therefore, it could be argued that traits do not remain stable, with dementia, due to the neurological deterioration with dementia. In addition, the view that traits show a low correlation with behaviour (due to the interaction of the traits with external factors) suggests that it is difficult to show a relationship between the traits and behaviour presentation in dementia.

To investigate whether personality affects adjustment to residential care, it is necessary to concentrate on aspects of personality remaining stable over time, irrespective of dementia (which does not appear to be the case with the five traits). In addition, there has to be some relationship between personality and behaviour to assess whether personality is stable over time and goes on to affect adjustment.

There have been few studies to date that have investigated the affect of personality on adjustment for people with dementia, and these are cited below:

Brandt et al (1998) through their work with people with dementia in residential care noted that families commented on their relatives' adjustment to the care setting, being due to their pre-morbid personality. They therefore investigated the affect of pre-morbid personality of Alzheimer's patients in relation to their adjustment to residential care. They investigated 28 Alzheimer's patients, at all stages of the illness and used the NEO-

PI-R, with knowledgeable informants, as their measure of personality, and the Nursing Home Adjustment Checklist (NHAC) as their measure of adjustment. They found that there was little correlation between pre-morbid personality and adjustment and concluded that pre-morbid personality is not a good predictor of adjustment.

Low, Brodaty & Draper (2002) also investigated the relationship between pre-morbid personality and behaviour, mood and psychological difficulties, to clarify the findings to date, using the NEO-PI. 58 informal caregivers completed the NEO-PI. The behaviour, mood and psychological difficulties were assessed using the BEHAVE-AD (Reisberg et al., 1987). This is a 26-item observer rating scale containing seven sub-scales, each rated 0-3: a) paranoid and delusional ideation; b) hallucinations; c) activity disturbance; d) aggressiveness; e) diurnal rhythm; f) affective disturbance; and g) anxiety and phobia. They found that residents that were rated as having been more agreeable pre-dementia, displayed more hallucinations, aggressiveness, affective disturbance and behaviour disturbance. However, they found little relationship between the other four traits of personality and behavioural, mood and psychological difficulties.

Within these studies the measure of personality used was the NEO-PI and this measure is developed from the five-factor model of personality (McCrae & Costa, 1987) and therefore as measuring aspects of personality which would appear to be vulnerable to change with dementia, as they are neurologically located in the neo-cortex. There have been a few studies that have investigated the effect of personality on adjustment to residential care and not using the NEO-PI. These studies obtained very different results from those cited above:

Hagberg, Hagberg & Saveman, (2002) investigated the relationship between personality and life quality in residential care, using the Gordon's Personality Inventory (GP:A). They stated that the reasons for this were firstly because the GP:A is more differential in the personality descriptions than the five-factor model and secondly, it holds a number of factors of greater interest for studying it's relation to the life quality dimensions. The results show that various personality characteristics relate to different aspects of life quality. For example, emotional stability is related to psychological well-being and satisfaction in later life. In contrast, original thinking and sociability have a negative effect on some aspects of quality of life in residential care. They conclude that personality is an important factor in how life quality is interpreted and understood in older adults in residential care.

Magai et al (1997) investigated personality by examining more basic elements of personality – emotional expression. They investigated 27 residents and the families were asked to provide information about pre-morbid and present functioning. The measures that were used were the Attachment Style Questionnaire, the Feelings and Emotions Inventory (FEI) and the Adult Behaviour Questionnaire. They found that pre-illness attachment predicted the current degree of positive affect and that pre-morbid dimensions of emotional regulation also related to emotional behaviour. For example those who were rated as being pre-hostile, were found to present with anger, contempt and disgust in their current behaviour. They state that the findings suggest that there may be substantial continuity in personality traits linked to emotionality (and a function of the older brain structures) during mid- late stage dementia and this affects behaviour presentation.

Although this study shows a link between emotionality and current behaviour presentation, it is not clear how emotion links to personality, and the study did not use a measure of personality derived from emotions, but reported emotional expression. This makes it difficult to suggest that personality affects the behaviour, without understanding exactly where aspects of personality are derived from emotions. In addition, the majority of studies cited above have investigated behaviour and adjustment using questionnaires rather than observation.

Of the few studies which have investigated the effect of personality on adjustment for people with dementia, it is evident that the results have been inconsistent (Brandt et al, 1998; Low, Brodaty & Draper 2002; Hagberg, Hagberg & Saveman, 2002; Magai et al., 1997). It could be suggested that one of the reasons for this is the measure of personality used. As indicated above, those studies using the NEO-PI have found little relationship between personality and adjustment (Brandt et al, 1998; Low, Brodaty & Draper 2002) however, when other measures of personality were used, relationships have been found between personality / emotional expression as a form of personality and adjustment / behaviour presentation.

Therefore, this indicates that, when exploring personality and adjustment for people with dementia, the measure used to investigate personality is very important. There is evidence that personality traits change due to neurological deterioration. Therefore the personality measure used should concentrate on aspects of personality thought to remain consistent over time, irrespective of dementia. Due to the fact that dementia is wide spread throughout the neo-cortex, the aspects of personality should be functions of the older brain structure, relatively unaffected by dementia (Lezak, 1995). It is therefore

necessary to concentrate on theories that investigate the basic elements of personality, which are functions of the older brain structures.

1.4.4 Basic Elements of Personality: Emotions, temperament and neuro-anatomy

Murray (1938) and Solms & Turnbull (2002) argue that to discover the true origin of behaviour presentations, it is necessary to take a step back from the complexities of what personality consists of and look rather at where its derivation - the internal states which underlie personality. Solms & Turnbull (2002) argue that these internal states are aspects of consciousness that would be left if all externally derived content were removed. They argue that if an individual is deprived of all sensory images, they will still be conscious and aware of their inner self. Murray (1938) believes that these internal states are 'needs' and Solms & Turnbull (2002) suggest that the internal states are emotions and temperament. They both suggest that internal states are the strong driving force of behaviour and are reflected in the kind of behaviour commonly thought of as personality. In addition, the structures that forming the basis of emotions / temperament and needs, are thought to be housed on the phylogenetically ancient structure that lie deep in the middle and upper zones of the brain stem and are relatively unaffected by dementia (Banich, 1997). Both Murray's and Solms & Turnbull theories will be considered next.

Murray (1938) states that human behaviour is best understood as a reflection of underlying needs. He defined a 'need' as an internal directional force which determines how people seek out and respond to the environment. Some needs are biological (i.e.

need for food, water, air - primary / viscerogenic need) and other psychological (i.e. need for achievement, intimacy, affiliation, power and social need). Murray called these secondary or psychogenic needs.

To exemplify his need theory, Murray used the widely accepted idea of biological need, such as food. This biological need for food must be satisfied over and over again. As time passes, the need state gradually becomes more intense – and the strength of the need for food influences the behaviour to which it relates. The stronger the need for food the more intense the actions and the sooner it will be reflected in behaviour. Needs are also directive – they help determine the many possible actions occurring at one given time. Although he uses food as an example, he states that the same is true for the secondary psychogenic needs.

Murray argues that people differ from one another in their dispositional needs and some people have more of a particular need than others. For example some people have a greater need for intimacy, whilst others have a greater need for power. When needs are strong they are reflected in the kind of behaviours that are commonly thought of as relating to personality and the ongoing behaviour reflects the dispositional need that is the greatest. Murray's model provides a sensible portrayal of how people may shift from one action to another.

Solms and Turnbull (2002) also contribute to this position by examination of the role of older brain structure systems that may be involved in needs, emotions and temperament. The structures that form the core of the emotion-generating systems of the brain are the phylogenetically ancient structures that lie in the middle and upper zones of the brain

stem. Solms and Turnbull suggest that needs, emotions and temperament are internally driven and, although the environment can trigger certain behaviours, they are not changed or influenced by the external factors. The control of these systems – the dampening down or blocking – is thought to be located in the frontal lobes. Therefore damage to the frontal lobe results in the full presentation of these systems, without a blocking control.

Solms and Turnbull postulate four basic emotions in the brain (Panksepp, 1998) these are: Seeking, Rage, Fear and Panic.

The seeking system provides the arousal and energy that activates interest in the world around. It generates the feeling that something good will happen if we explore the environment or interact with objects and promotes exploratory behaviour. The system does not know what it is seeking, it is switched on the same way by all triggers and it looks in a non-specific way. The rage system is activated by states of frustration and these feelings release a stereotyped motor response associated with the well-known ‘fight’ response. This system is only activated sporadically but it can be activated at a continual low level and this is associated with a presentation of irritability and is usually caused by frustration of goal-directed activities – this primes the full-blown affective attack. The fear system generates feelings of fear-anxiety and is associated with the flight response. The person can display very clingy, anxious behaviours. Finally, the panic system generates feelings of panic-anxiety and is associated with feelings of loss or sorrow. When first activated it produces seeking behaviours together with distress vocalisation, but after a period of these behaviours, there is a change to withdrawal from the environment.

Both Murray and Solms & Turnbull suggest that there are basic elements of personality and these elements are the driving force for behaviour commonly associated with personality. They believe that these basic elements are internal states that are emotionally driven and they are not changed or influenced by external factors. However, the frontal lobe does act as a control on these elements, but, if this control is removed, a full presentation of these emotionally driven systems will be evident. Their theory supports the results found by Magai et al (1997) in the involvement of emotion expression.

1.4.5 Phenomenology, behaviour and personality

The above theories fit into the current literature pertaining to phenomenological factors affecting behaviour. These theories concentrate on the internal forces and the integration of internal states in the conceptualisation of behaviour presentation. This perspective focuses on these internal states in relation to adjustment to residential care and therefore links the theories above to the behaviour seen by people with dementia in residential care (Meddaugh, 1990). For example, Meddaugh (1990) found that people, prior to their entry into care, described as “doers” and “talkers” did not adjust as well to residential care as opposed to those that were, in pre-morbid state, quieter and less active in their outside activities. The person-centred movement has encouraged this phenomenological approach to the aetiology of BPSD and support of people with dementia who live in residential care.

However, it is still unclear how to measure these basic elements – these internal forces – of personality. The studies which have attempted to do this have not used measures of personality. For example, Magai et al (1993) investigated the emotional aspects of personality, using the FEI and Attachment Styles questionnaire, which may not provide direct information about the personality aspects derived from these basic elements. There have been theories attempting to name the aspects of personality which are based in these emotional systems and one of the most prominent theories to date is that proposed by Beck (1989). Beck investigated these ‘emotional systems’ or elements thought to be based in the older brain structures; and developed a scale to measure these particular emotional aspects of personality (Beck, 1983).

1.4.6 Sociotropic / Autonomous Modes

Beck (1982, 1983) investigated two aspects of personality present from birth until death (Moore & Blackburn, 1996) derived from emotion and temperament and, therefore, a function of the older brain structures (Finch & Graziano, 2001). These two aspects of personality are not thought to be fixed personality types, but modes that can dominate an individual’s psychological functioning. Beck termed the two modes autonomy and sociotropy and they are thought to be internal states that drive behaviour and are not controlled by external stimuli, but take their cues from the environment. In this way, it is possible to see a relationship between personality modes and behaviour, because the modes are not controlled by environmental events.

These modes are thought to encapsulate different needs within them: Autonomy encompasses the need for power – developing ones own capacity, strategies and interests that may or may not include people. Characteristics of autonomy are

acquisition of power, control over the environment and self-reliance. Sociotropy is characterised by receiving gratification from a wide range of meaningful interpersonal interactions, involving intimacy, sharing, empathy, understanding, approval, affection, protection, guidance and help. Beck (1983) states that one mode can predominate, or a person may show an equivalent intensity of the two. Where one mode does predominate, it is unlikely that they will have characteristic associated with the other mode (Beck, 1987). This is exemplified when considering the facets that are valued by each different personality mode. For example, those with autonomous-type personality modes place a high premium on mobility, freedom of action and freedom of choice, and may feel 'claustrophobic' not only when closed in by the physical environment, but in relationships with others (Beck, 1983). In contrast, those with sociotropic-type personality modes, physical closeness appeals and distance from family members could be traumatic, leaving the individual feeling anxious and depressed (Beck, 1983). There will be fewer people where the personality modes are in the more extreme form and in this state the two co-existing seems even more unlikely. For example, sociotropy can be expressed by attitudes such as "I need other people's help in order to carry out my goals", whereas autonomy would express attitudes such as "I can rely on myself to get what I want" (Beck, 1983).

Where one mode does predominate, there will be heightened sensitivity to threats to attributes that are valued by the individual (i.e. for autonomy, a threat to control and self-reliance, for sociotropy a threat to intimacy). He states that these specific threats might work to undermine the general coping mechanisms for those with autonomous and sociotropic type personality modes and produce specific types of affective disorders, thought patterns and behaviour presentation (Beck 1987). Beck (1983)

hypothesised that, when a threat to control or self-reliance occurs and those with autonomous personality modes perceive this threat as irreversible, this will precipitate a withdrawn depression, with thoughts around failure and feeling incompetent. They are predicted to exhibit withdrawal from the environment, such as not seeking help, profound loss of interest, avoidance of people and agitation (Beck, 1983). For those with sociotropic personality modes, threats to social interaction or intimacy are hypothesised to precipitate more restless type depression (Beck, 1983), with thoughts around loss, and self-denigration. It is predicted that there will be evidence of a need for social interaction, defined by seeking or demanding attention (Beck, 1987). In addition, Beck (1982) has predicted anxious, reactive presentations for those with sociotropic personality modes experiencing deprivation.

In order to test this theoretical formulation, scales were constructed by Beck et al (1983) specifically to assess the characteristics of sociotropy and autonomy. This is called the Sociotropy-Autonomy Scale (SAS) and is a 60-item measure used extensively to analyse personality characteristics – containing 30 sociotropic and 30 autonomous items, each item rated on a 5-point scale. The scale provides the indication of the frequency with which each statement can be individually applied.

Studies have used the SAS to verify relationship between the personality modes, vulnerability to different life events and the resultant behaviours and affective disorders (Moore & Blackburn, 1994).

Hammen et al. (1989) examined the relationship between autonomy and sociotropy as measured on the SAS (SAS-A and SAS-S, respectively) and vulnerability to different life

events, with 22 unipolar patients and 25 bipolar patients. The participants were asked to complete the SAS. They were then split into three groups on the basis of the scores on the SAS, those that were predominately autonomous or sociotropic (i.e. their autonomous score exceeded the sociotropy score by more than three points, and the reverse if the sociotropy score predominated) and the 'mixed' group, and this group contained more participants. They conducted interviews with each of the participants about what they considered were stressful life events occurring within the previous six-months and why these were stressful. They found a definite association between autonomy and the need for power, and sociotropy and their susceptibility to interpersonal events and need for approval. However, they did not find any associated with the mixed group and hypothesised this was because the mixed group did not value specific attributes as highly as the other two groups and therefore were not as sensitive to threats.

Robins and Luten (1991) investigated the SAS and resultant behaviour, with 50 psychiatric inpatients who were diagnosed with *Diagnostic and Statistical Manual of Mental Disorder* (rev, 3rd ed.; (DSM-III-R) American Psychiatric Association, 1987) criteria as suffering from major depressive disorders. They developed the Personality Style Inventory (PSI – Robins et al, 1990) to measure the constructs of autonomy and sociotropy. It consists of 19 clinical features that are hypotheses by Beck (1983) to be related more strongly to autonomy or sociotropy. They then compared this to the predicted behaviours for the two personality modes, when the person was in an environment which presented a threat to valued attributes. Firstly, they found that there were strong, positive correlations between the sociotropic personality mode questions and the items constituting the clinical features i.e. need for reassurance, variability in

mood, need for interpersonal interaction, evidence of clinging / crying and restless walking about. Secondly, they found again there was a strong, positive relationship between scores on the autonomous personality mode questions and the items constituting the clinical features i.e. loss of interest or pleasure, feeling like a failure, self-blame, avoidance of people and irritability.

Quimette et al (1994) investigated the relationship between personality modes as measured by the SAS and the presence of affective disorders, when the individual was in an environment which presented a threat to attributes they valued. They used a sample of 138 outpatients meeting the DSM-III-R criteria for depressive disorder. They found that there was a strong positive relationship between SAS and different depressive presentation from the autonomous and sociotropic personality modes. They found that highly autonomous people exhibited depressive symptoms that indicate withdrawal and defeat. In contrast, those highly sociotropic people experienced depressive symptoms that reflect deprivation. These results were similar to those found by Robins, Block and Peselow, (1989).

Mak (2001) also investigated the relationship between personality modes and affective disorders. He used a sample of 414 American college students and used the SAS to measure personality and questionnaires pertaining to life event, anxiety and depression to measure affective disorder and life events. He found that sociotropy was specifically related to high levels of anxiety, when life events included threats to the attributes they valued (i.e. loss of meaningful relationships due to leaving home to go to college). These were similar results to that found by Sun et al., (1999) who investigated the SAS, and the vulnerability to different life events in relation to anxiety (as measured by the

Chinese State-Anxiety Inventory). They used a sample of 165 college students, and they found that self-reliant problem solving and low family support predicted lowered anxiety in highly autonomous participants, but heightened anxiety for highly sociotropic participants.

Admittedly, other studies have been less conclusive – Clark et al., (1992) found no significant relationship between autonomy and life events resulting in losses of those prized facets, such as power or self-reliance, although significant interaction between sociotropy and the loss of prized facets, was found.

The above studies that have used the SAS have samples of a range 20-70 years old and, therefore, have not investigated the SAS in relation to an older adult sample. In addition, none of the studies above have used a sample suffering from dementia.

There has been one study to date that has used the SAS as the measure of personality with older adults. Mazure et al (2002) used the SAS to examine the interaction of stressful life events with personality styles to predict major depression. They justified this by citing the previous work investigating the stability of the characteristics over time (see Moore & Blackburn, 1996). They found that negative interpersonal events were associated with depression in those with a high need for approval and reassurance in the context of interpersonal relationship (namely sociotropy), whereas negative achievement events were associated with depression in those who placed heavy emphasis on personal success and control (namely autonomy).

Although this study did not investigate personality in relation to residential care, it does investigate personality and the effect of an environment where valued facets for each personality mode, are absent. It could be argued that the residential care environment does threaten those facets prized by both those with autonomous and sociotropic personality modes. Agich (1993) states that respecting the valued attributes associated with autonomy in long-term care is frequently difficult because the condition that brings older adults into long-term care – confusion, memory loss, dementia and a host of diseases associated with being old – are such that the very capacity for choice, control, self-reliance and decision-making is seriously compromised, if not absent. The residential care environment may threaten those with sociotropic personality modes because, as stated by Beck, (1983) meaningful relationship and family are prized facets and distance from these relationships is traumatic. The people in residential care are relative strangers, with whom the individual has not built meaningful relationships. In this way the aspects of interpersonal interaction valued by those with sociotropic personality modes (i.e. intimacy, empathy, protection, guidance) are absent (O'Connor & Vallerand, 1994). Relocation may therefore result in similar affective disorders and behaviour presentation as that described by Mazure et al., (2002), and ultimately by Beck (1983).

From the research with the SAS is it evident that those people with autonomous or sociotropic personality modes present with specific behaviours and affective disorders when they are in an environment which presents a threat to the attributes that they value. This has also shown to be the case for an older adult population. Admittedly, the SAS has not been used with an older adult population with dementia. However, this research would argue that, because the personality modes are thought to be consistent over time

and a function of the older brain structures, relatively unaffected by dementia, they would remain stable irrespective of dementia and therefore would be evident in behaviour presentation. This will be addressed within this research. The SAS is focusing directly on the aspects of personality this study wishes to measure in relation to adjustment to residential care and, as this research has shown, studies using other personality measures such as the NEO-PI, which granted, have been validated on an older adult sample, may be missing important relationships because they are focusing on aspects of personality that do change due to dementia.

1.5 SUMMARY

The literature reviewed suggests that in the last decade the approach to BPSD in residential care has moved from biomedical to integrative bio-psychosocial understandings of behaviour in people with dementia. Within this framework psychological approaches have focused on the individual's adjustment to the disease (in this case dementia) and to the environment (for example social relationships or an unknown residential or nursing home). It is suggested by authors such as Stokes (2000) that dementia acts as a barrier to communication and that some BPSD may simply be a consequence of a person's inability to communicate or express a particular need. The need to consider the person's unique individual experience in understanding and intervening in BPSD has some empirical support (see Moniz-Cook et al, 2001). This "Person-Centred Approach", has not only shaped theory and modern approaches to intervention to date, but also Government Policy, as reflected by the NSF for older people's emphasis on person-centred care.

In section 1.4 it is argued that understanding a person's unique perspective and behaviour in terms of personality theory and thus developing systematic person centred intervention for people with the label of BPSD is important. This gap in the literature may be explained by the view that arises from biomedical perspectives that dementia results in personality change. Thus a biomedical perspective might argue that personality theory has little to offer in the support and management of older people with dementia.

In the review of the personality literature in section 1.4 it is argued that some aspects of personality may well be stable, irrespective of dementia and that personality may indeed influence adjustment to the experience of dementia, particularly within residential and nursing homes. In fact few studies to date have investigated the relationship of personality and BPSD, but where these exist the results have been inconsistent. Some studies conclude that personality does not influence adjustment to residential care (Brandt et al., 1998; Low, Brodaty & Draper 2002) whilst others suggest that personality does affect life quality and emotional expression in residential care (Hagberg, Hagberg & Saveman, 2002; Magai et al., 1997).

In section 1.4.3 it is argued that one reason for the observed equivocal results relates to the models and associated measurement of personality. Some studies have adopted the five-factor trait approach to personality, which commonly uses measures such as the NEO-PI (for example Brandt et al 1998; Low, Brodaty & Draper, 2002). Others such as that of Hagberg, Hagberg & Saveman, (2002) and Magai et al., (1997) reach different conclusions about the stability of personality in dementia by measuring personality in terms of emotions and behaviour rather than the traditional five-factor trait approach.

Furthermore, where studies have investigated the relationship between personality and BPSD, they have not examined how personality factors are translated into behaviour as examined through direct observation *in situ*.

It is noted that dementia affects higher cortical structures i.e. the neo-cortex, and that some traits measured by the five-factor model / NEO-PI may indeed be affected neurological impairment due to dementia. However, other basic elements of personality do appear to remain consistent from birth throughout life possible because they are a function of the older brain structures and therefore remain stable irrespective of dementia (Beck, 1987; Finch & Graziano, 2001). These basic elements of personality were conceptualised by Beck (1983) as 'personality modes' where the individuals may be seen as "autonomous" and "sociotropic" across the personality dimension. Beck (1983) proposed that one mode may predominate, or there may be an equal intensity of both modes. Where one mode predominates, the individual will have a number of valued attributes that are specific to each of the personality mode. Beck (1983) suggests that for autonomous personality modes these are "power, control and self-reliance", for sociotropic personality modes these are "receiving gratification from interpersonal interactions, involving intimacy, empathy, understanding and approval". They will also be sensitive to threats to these attributes, and such threats are thought to occur in residential-care (Agich, 1993; O'Conner & Vallerand, 1994). When these threats do arise, the individual is thought to respond with behaviours presentations and mood problems that are specific to the personality mode. For example, those with autonomous-type personality modes would be expected to show withdrawal, profound loss of interest, avoidance of people, feeling a failure and depression (Beck, 1983, 1987; Robins & Luten, 1991). In contrast those with sociotropic type personality modes would

be expected to show attention-seeking behaviour, crying, clinging and increased anxiety (Beck, 1983; Robins & Luten, 1991; Mak, 2001). The present study will examine whether Beck theoretical stance on personality theory can be applied to understanding the behaviour of people with dementia and their adjustment to residential care.

The measure developed to tap into the personality modes, namely the SAS (Beck, 1983) has not been validated with an older adult population with dementia. However, the SAS does specifically measure the aspects of personality that are thought to remain consistent over time, irrespective of dementia, and it seems reasonable to use the scale, if it can be validated for use as a informant-interview with an older adult population with dementia, to examine the role of personality in the adjustment of older adults with dementia, to residential care.

The primary aim of the present research is to examine whether personality (defined as “personality modes”) affects adjustment to residential care, for those with dementia. The measure used by Beck will need to be validated with a sample of older people with dementia. The study will also allow a better understanding of whether personality does in fact remain stable, irrespective of dementia.

1.6 RESEARCH QUESTIONS AND HYPOTHESES

The research questions and related hypotheses are summarised below:

Research Question 1: Can the SAS be used as a measure of personality with an older adult (dementia) sample?

Hypothesis 1: The SAS, used within a relative - informant interview will reflect the dimensional aspects of personality in people with dementia living in residential care i.e. is it possible to determine a normally distributed sample with people at the extremes of autonomy (SAS-A) and sociotropy (SAS-S).

Research question 2: Do personality modes (i.e. soicotropy and autonomy) remain stable over time, irrespective of dementia?

The prediction is that personality modes will remain stable irrespective of dementia (neurological impairment) in older adults living in residential care, and this will be shown by a similar behaviour and mood presentation that which would be expected.

Hypothesis 2: People with dementia will behave in different ways, dependent on their personality modes i.e. whether they are autonomous, sociotropic or are the majority group (i.e. a combination of autonomy -sociotropy described here as mixed - SAS-M)

Hypothesis 3: People with dementia will show different problematic behaviours and mood problems, dependent on their personality mode. For example greater social avoidant interaction, aggression and depression is predicted from those with autonomous personality modes and social reassurance seeking behaviour and anxiety from those with sociotropic personality modes, irrespective of dementia and neurological impairment.

Research question 3: Does personality influence adjustment to residential care in older people with dementia?

Hypothesis 4: The greater the SAS -A and the SAS -S the poorer the adjustment to residential care in terms of mood and behaviour.

Hypothesis 5: There will be significant problems of adjustment to residential care as demonstrated by mood and behaviour within the autonomous and sociotropic groups when compared to the mixed group.

CHAPTER 2

METHODOLOGY

2.1 DESIGN

The study uses a quasi-experimental group comparison design because participants could not be randomly allocated to the experimental groups. The groups were dependent on personality modes.

2.2 PROCEDURE

2.2.1 Ethical Approval

Ethical consent was gained from the Hull and East Riding Local Research Ethics and Research and Development Department at West House Approval, prior to the commencement of this study. Primarily, consent was gained from the manger of each residential home, for permission for the study to be conducted at their premises.

Relatives' agreement was obtained with a written assent form (see appendix I), this included:

1. Assent for participation in the interview stage of the study (at the postal stage).
2. Assent for access to records kept at the residential home (at the postal stage).
3. Assent for the observation component (at the postal stage).

2.2.2 Inclusion & Exclusion

Inclusion criteria were as follows:

Participants were included if they had a diagnosis of dementia – (This information was gained both from the residential home manager and the records. The experimenter, using the Clifton Assessment Procedure for the Elderly: Cognitive Assessment scale and Behaviour Rating Scale (CAPE-CAS/BRS) also confirmed this). Participants needed to have been a resident in the home six months or longer, to differentiate prolonged adjustment difficulties, from an initial adjustment phase.

Exclusion criteria were as follows:

1. If the participant had no living relatives
2. If the participant had suffered a major life event, other than relocation, within the last six months.
3. If they had a psychiatric history.

2.2.3 Recruitment of Residential Home

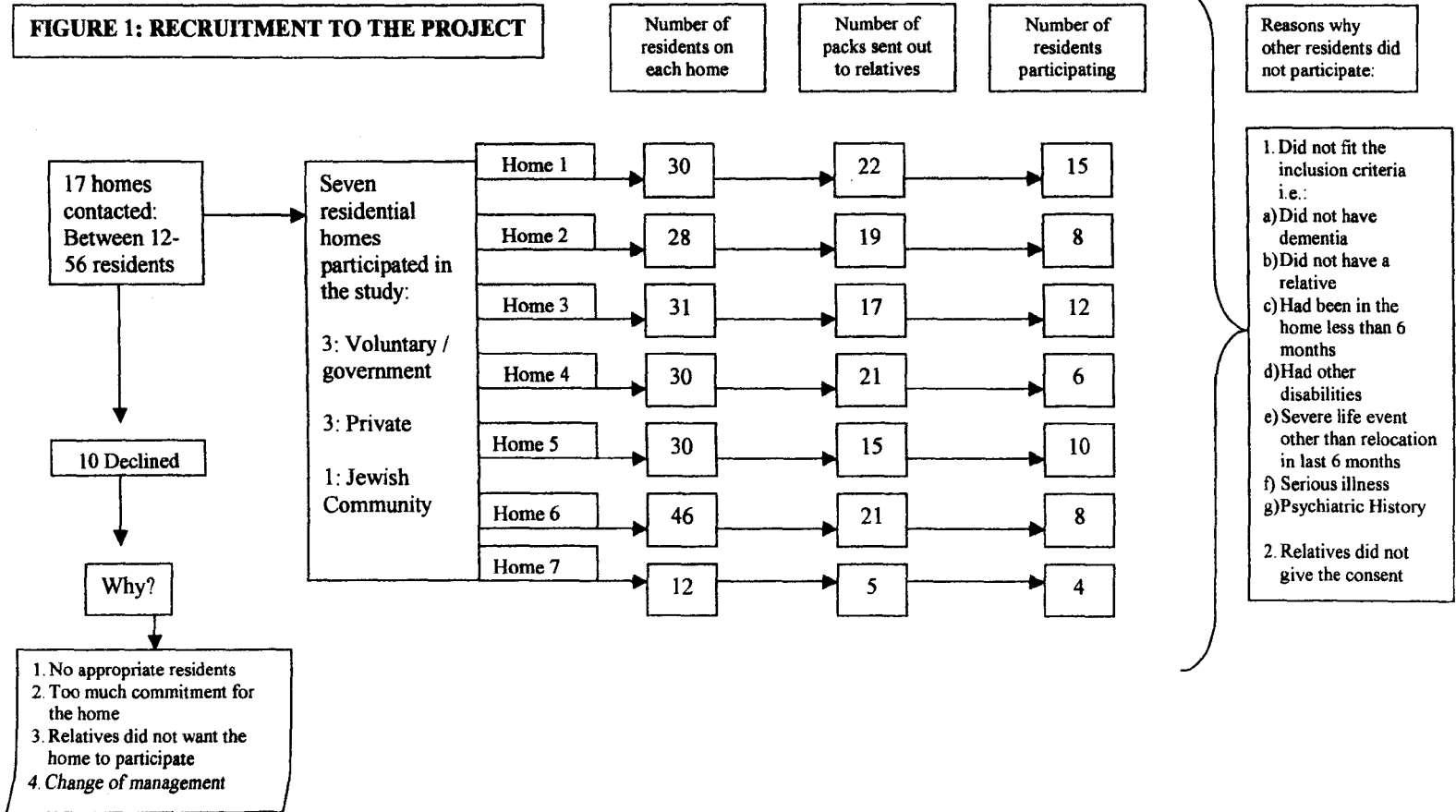
The experimenter contacted 17 residential homes, within Hull and East Riding, by telephone, to briefly describe the project and ask for a meeting with the manager of the home in which a more detailed outline of the study would be discussed. Five residential homes declined at this point, stating that the project was too much of a time constraint and it would not be possible due to staff shortage. Interviews were therefore set up with 12 residential homes. At all the interviews the home managers expressed an interest in

the project and were willing to help. Of these 12 however, two stated that they did not think they had any residents that would fit the inclusion criteria at present. One agreed to the research, but then there was a change of structure within the residential home and the new manager did not think it would be appropriate to participate at that time. Two other homes initially agreed to the research, but consequently withdrew their consent. The first home had met with the relatives of the residents and they had expressed some apprehension about the home being involved with the research. The second had no consent form returned from the relatives.

All of the remaining seven homes participated within the research. The number of residents within these homes varied from 12 to 46. This information is summarised in a flow chart (figure 1).

When the residential home had agreed to the research, the manager of residential home used the inclusion/exclusion criteria to construct a list of possible participants. A pack was then put together which included a covering letter, an information sheet about the study, an assent form, and a stamped addressed envelope (see the appendix II, the postal pack). The covering letter was written by the manager and experimenter, and was signed by both. In the covering letter it was stipulated that the experimenter would phone the relative ten days after receiving the pack, unless the assent form was returned saying that the family did not want to be contacted.

FIGURE 1: RECRUITMENT TO THE PROJECT



17 homes contacted:
Between 12-56 residents

10 Declined

Why?

- 1. No appropriate residents
- 2. Too much commitment for the home
- 3. Relatives did not want the home to participate
- 4. Change of management

Seven residential homes participated in the study:
3: Voluntary / government
3: Private
1: Jewish Community

Home	Number of residents on each home	Number of packs sent out to relatives	Number of residents participating
Home 1	30	22	15
Home 2	28	19	8
Home 3	31	17	12
Home 4	30	21	6
Home 5	30	15	10
Home 6	46	21	8
Home 7	12	5	4

Reasons why other residents did not participate:

- Did not fit the inclusion criteria i.e.:
 - Did not have dementia
 - Did not have a relative
 - Had been in the home less than 6 months
 - Had other disabilities
 - Severe life event other than relocation in last 6 months
 - Serious illness
 - Psychiatric History
- Relatives did not give the consent

The postal packs were given to the manger of the home, with stamps attached. The manger then wrote the addresses of the relatives on the envelopes, making the process confidential.

The experimenter returned to the home to phone the relatives, 10 days after the packs had been sent out. This was done at the home so the experimenter was under the supervision of the manger and so that no telephone numbers were taken off the premises without the relatives' permission. The experimenter then contacted the people who had returned the consent forms and also those people who had not returned the consent forms, but had not stated that they did not want to be contacted. The purpose of the telephone call was three-fold. Firstly, to allow the relatives to ask any questions they had about the study. Secondly, to ask permission to look through the residents' records at the residential home, if the consent form had not been returned and thirdly, to arrange a time for an interview with the relative.

The experimenter then was given a list of key-workers for each of the participants that had given consent. The experimenter spoke to the key-worker about the purpose of the research and what would be needed from them and all key-workers gave their consent to the study.

2.2.4 Confirmation of Inclusion Criteria

Once permission was gained to look through the patients' records, the experimenter was able to confirm that the resident met the inclusion criterion. The experimenter then met with each of the participants to complete the CAPE-CAS.

2.2.5 The Interview Component - Relatives

Those relatives who agreed to be interviewed were contacted by telephone to arrange a suitable time for the face-to-face interview to take place. The purpose of the interview was to firstly, complete the personality measure, secondly, gain any supplementary information about the participant's personality and thirdly, to confirm the demographics. Prior to the interview, its purpose and components were explained, and it was reiterated to the relatives that they could withdraw their consent at any point and refuse to answer any questions that they did not wish to answer. The interview took place at the home of the relative or the residential home, at a time and date that was convenient to them.

The interview lasted on average one hour, however this was variable. After completion of the interview, it was confirmed that the study would be written up and the identity of their relative and information about the relative would be confidential. Any questions were answered and the relatives were thanked for their participation.

2.2.6 The Interview Component - Staff

Following the interview with the family member, a time was arranged with the key-worker for each of the residents to meet with the experimenter to complete the Cornell Scale of Depression, the Rating Anxiety in Dementia Scale (RAID), the mood scale of the Behavioural assessment scale for later life (BASSOLL-mood), the Challenging Behaviour Scale (CBS) and the CAPE-BRS. This took around 20 minutes per resident

and was completed at the residential home, at a time that was convenient for the key-worker.

2.2.7 The Observation Component

Finally, the experimenter conducted direct observations of each of the participants over a 2-hour period. These observations took place between the hours of 10.00am – 12.00pm and 2pm – 5pm at each of the residential homes.

2.2.8 Setting

All the relative interviews were conducted either in the individuals' home, or at the residential home. The staff component of the research was completed at the residential home, by the key-worker for the resident with the experimenter asking the questions. The CAPE-CAS was completed by the residents', with the experimenter asking the questions. The experimenter completed the observations. Inter-relater reliability was established with one of the care workers, who was both familiar with the observation format and the research. The observations were conducted within the residential home.

2.3 PARTICIPANTS

The total number of residents in the seven residential homes was 207. However, packs were only sent to 119, for the following reasons:

1. 33 were not thought to have dementia
2. 21 had been in the residential home for a period of less than 6 months
3. 9 did not have a relative that could be contacted
4. 18 had a major life event, besides relocation, within the last six months. For example, they had lost someone close to them.
5. 7 had a psychiatric history

Of the remaining 119 residents, 42 returned their consent forms, and 22 gave consent over the phone and signed the consent form when the interview was conducted. Unfortunately, one of the participants passed away before the research commenced within their home. Therefore, consent was gained from 63 participants in all. 56 relatives did not give consent for this research. The reasons are as follows:

1. 15 returned their consent form stated that they did not wish to be contacted by the experimenter.
2. 17 expressed concern about the observational component of the research. They felt that their relative maybe become distressed by this, and therefore did not want to consent to the study.

3. 4 lived out of the area and had to travel to visit their relative. They did not want to spend some of the limited time they had with their relative, completing an interview.
4. 4 stated that they were concerned they may find the interview upsetting.
5. 16 gave no reason why they did not want to participate within this research.

Therefore in total, 63 residents participated within this research. The participation rate for this study was 52%. This information is summarised in a flow chart (figure 1).

2.4 Measures

2.4.1 Demographic Information (taken at each interview)

The following variables were recorded for each participant:

- Age
- Sex
- Residence for 10 years or more (i.e. in Hull or other areas)
- Marital status
- Number of Children they have had
- Profession
- Religion
- Age when left school
- Stage of dementia
- Medication

2.4.2 Summary of Psychometric measures

The study uses six psychometric instruments: Sociotropic Autonomous Scale - SAS (Beck, 1989); Clifton Assessment Procedure for the Elderly: Cognitive Rating Scale / Behaviour Rating Scale – CAPE-CAS/BRS (Patties & Gilleard 1979); Cornell Depression Scale for Depression in Dementia (Alexopolous et al. 1988); Rating Anxiety in Dementia Scale - RAID (Shankar, Walker, Frost & Orrell, 1999); Behaviour Assessment Scale of Later Life – BASOLL-mood (Brooker, Sturme, Gatherer & Summerbell, 1993); and the Challenging Behaviour Scale - CBS (Moniz-Cook, Woods, Gardiner, Silver & Agar, 2001). These were completed within each of the residential homes. They were administered by the researcher and completed by relatives (SAS) staff (BRS, Cornell, RAID, BASOLL-mood & CBS) and residents (CAS) – Further data was collected from two-hour observations of the residents by the researcher. The format for these observations was a technique developed from the Challenging Behaviour Observational Scales - CBOS (Duggin & Richard, 2000) – (see appendix III, outcome measures). The structure and psychometric properties of each of these scales have been outlined below. This also includes a description of the CBOS technique. Examples of their usage in studies, within the field of older adults, have also been included. These measures were used in relation to different hypotheses. Figure 2 shows the relationship of the measures to the hypotheses.

2.4.3 Personality Measure

2.4.3 (a) *Sociotropy-Autonomy Scale (SAS)*. (Beck, 1983) – (used as part of the interview component with relatives)

DEVELOPMENT & STRUCTURE: Beck (1983) has described two relatively stable personality characteristics, which he termed Autonomous and Sociotropic personality modes. He developed a new scale to specifically measure both these personality modes, the Sociotropy and Autonomy Scales (SAS). This is a 60-item measure used extensively to analyse the personality modes – containing 30 autonomous questions (SAS-A) and 30 sociotropic questions (SAS-S). Factor analysis suggests that sociotropy consists of three sub-scales – Concern about Disapproval, Attachment, and pleasing others – and the autonomy scale also consists of three subscales – Achievement, Freedom of Control and preference for Solitude. Each item is rated on a five-point scale, from 0-100. Therefore, for both the autonomous and sociotropic scales (SAS-A and SAS-S) the maximum score is 3000, the mean being 1500. The scale provides an indication of the frequency with which each statement can be individually applied. An example of an autonomous statement is “I can only rely on myself to get what I want”. An example of a sociotropic statement is “I need other people’s help in order to carry out my goals”.

The autonomous and sociotropic personality modes are measured as separate distributions, but they have the assertion that those who score highly on the autonomous questions (i.e. scores of 2000 or above – 2 or more standard deviations away from the mean) would have low scores for the sociotropic questions and vice versa. This is evident when the facets and statements pertaining to each of the personality modes are taken into consideration (see the statements above). In addition, it is hypothesised that

fewer people would score at the extreme ends of either the autonomous or sociotropic personality modes and the majority of people would have a score of less than 2000 for both modes (i.e. less than 2 standard deviations away from the mean).

RELIABILITY & VALIDITY: The SAS-A and the SAS-S have an excellent internal consistency (Cronbach alphas of 0.90 & 0.88 respectively), and the subscales derived for each of the scales are internally consistent. The SAS-A and SAS-S had a significant but low negative correlation ($r = -0.18$) indicating that the scales are largely independent.

The test-retest reliabilities have been established by administering the SAS twice, the second 4- to 6- weeks after the first. The result showed good test-retest reliability (0.75 – sociotropy and 0.69 – autonomy) – (Robins, 1985). Construct validity was indicated by a strong positive correlation between sociotropy scores and the “emotional reliance on another person” subscale of Hirschfield et al (1977) Interpersonal Dependency Inventory (IDI) - (IDI = 0.66, $p < 0.0001$) and between autonomy and the “assertion for autonomy” subscale on the IDI (0.43, $p < 0.001$) – (Hammen, Ellicott, Gitlin & Jamison, 1989).

Having said this, the SAS was validated on an outpatient clinical population, and, although it has been used in studies with non-clinical population (i.e. Mak, 2001; Sun et al., 1999), it has not been validated with this population. Therefore it was necessary to investigate the SAS with a non-clinical population, firstly to discover whether the SAS was a valid measure with this population (indicating that, if the modes remain stable, it should be a valid measure in an older adult population), and secondly to establish cut-

points (see results, section 3.3). The results of this investigation offered face validity to the SAS with a non-clinical population (for the investigation see appendix V, Pilot Study).

UTILISATION: The SAS has been used extensively with the general population by researchers such as Robins, Block & Peselow (1989); Ouimette et al (1994) and Robins & Luten, (1991). It has also recently been successfully utilised with the older population by Mazure et al (2002) who investigated stressful life events and their interaction with personality styles and the resulting affective disorder(s).

This research project is investigating aspects of personality and it was therefore necessary to employ a measure that specifically considered only these aspects and was not contaminated by other aspects that change over time. In addition it has been used successfully with the older adult population when investigating stressful life events, of which relocation is one. The validity of the measure will be investigated within this research and therefore this measure was therefore seen as an appropriate measure for this study.

2.4.4 Cognitive and Functional Measure

2.4.4 (a) *Clifton Assessment Procedure for the Elderly & Behaviour Rating Scale (CAPE-CAS/BRS)*. (Patties & Gilleard 1979) – (used to part of the interview component with staff and the resident)

DEVELOPMENT & STRUCTURE: CAPE-CAS/BRS was designed to provide a reasonably brief method for assessing the cognitive and functional competence of the

elderly. The CAPE-CAS/BRS consists of two independent measures: The Cognitive Assessment Scale (CAS) and the Behaviour Rating Scale (BRS). The CAS consists of three subscales: Information and Orientation, Mental Ability and Psychomotor. Information and Orientation is composed of 12 items on a binary scale. Mental Ability is composed of 4 items on a 4-point scale. Psychomotor is composed of one items. The BRS comprises of four subscales: Physical Disability (PD), Apathy (A), Communication Difficulties (CD) and Social Disturbance (SD). PD is composed of six items, A is composed of five item, CD of two items and SD of five items, all on a 3-point scale.

The scores are combined into a “dependency grade” for both the CAS and BRS independently. These two dependency grades are then combined together, resulting in an overall grade for each individual. Each grade indicates a different level of dependency:

- Grade A: No impairment: independent elderly – comparable to those living without support in the community.
- Grade B: Mild impairment: low dependency – likely to include those needing some support in the community.
- Grade C: Moderate impairment: medium dependency – people functioning at this level are likely to need residential care or considerable support and help if at home.
- Grade D: Marked impairment: high dependency – it is within this category that there is the greatest overlap between those in social services accommodation and those in hospital care.

Grade E: Severe impairment: Maximum dependency – this level requires residential care and increased demands in terms of staff time.

On the CAS, a score between 35-30 is equivalent to grade A, 29-24 grade B, 23-16 grade C, 15-9 grade D and 8-0 grade E. On the BRS a score between 0-3 is equivalent to grade A, 4-7 grade B, 8-12 grade C, 13-17 grade D and 18+ grade E.

RELIABILITY & VALIDITY: The test-retest reliability of each of the subscales of the CAS were investigated both in the short and long term. In the short term the reliability is: Information and Orientation 0.87; Mental Ability 0.90 & and Psychomotor 0.79. These suggest that the measure shows an adequate short-term reliability. Long-term test-retest reliability is: 0.79; - 0.90; 0.61 - 0.69; 0.56 - 0.86 respectively. These results suggest stable scores in this population. Inter-rater reliability was explored for the BRS through five studies¹. The general finding was that the scale and the item reliabilities are reasonably high. (see Patties & Gilleard 1979).

Concurrent validity of the subscales for the CAS (with Wechsler Memory Scale - WMS) was found to be 0.90, indicating that a large proportion of the variance obtained from the WMS is accounted for by the Information/Orientation of the CAS. Construct validity of the four subscales for the BRS was explored in a series of factorial analyses of inter-item relationships observed from ratings of the diagnostically separate groups (Gilleard, 1987). Although there are differences within the factors, it was considered that, for the purposes of this assessment, the existing division of sub-scales is satisfactory for the evaluation of general behavioural component.

¹ Studies 1 & 2: Employing acute psychiatric
Studies 3 & 5: Employing Chronic Psychogeriatric
Study 4: Employing patients and residents in Residential Homes

UTILISATION: A cut-off point of 8 or below on the Information and Orientation was shown to correctly classify over 90% of cases diagnosed with dementia, and a later study showed an accuracy of over 80% over a two-year period (Pattie & Gillaerd, 1975, 1977, 1978a). Mcpherson *et al* (1985) using a different style of investigation, supported the CAPE's ability to distinguish between levels of impairment specifically associated with dementia. The CAPE has been widely used as a measure of the prevalence of dementia in community and hospital settings (Pattie, 1989).

Considering the utilisation of the scale in association with determining dementia within a residential setting, this measure was seen as an appropriate to investigate Dementia within this study.

2.4.5 Measure of Affective Disorders

2.4 v (a) *Cornell Depression Scale. (Alexopolous et al. 1988) – (used as part of the interview component with staff)*

DEVELOPMENT AND STRUCTURE: The Cornell Scale was specifically designed for the rating of symptoms of depression in demented patients. The scale is a 19-item instrument. It is composed of five subscales, each consisting of 3-4 items. A score of 6-9 suggests episodic depression, 10-15 probable major depression and 16 or above definite major depression.

RELIABILITY & VALIDITY: The internal consistency of the Cornell was 0.84, suggesting the Cornell scale is reliable. The inter-rater reliability ranged from 0.64 -

0.99. The clinicians who scored the Cornell Scale were able to obtain more information from those with mild, compared to severe, dementia. This was examined to discover whether it affected the reliability. The sample was divided at the median of the subject Mini Mental State (MMS) score, (MMS score: 8). This split the group into a severe group and a less demented group. The score from the two groups were similar (severe dementia: 0.63; less demented group: 0.62) and therefore indicates that the Cornell Scale is reliable for use with more severely dementia people.

Concurrent validity was explored with 48 demented subjects. Kruskal-Wallis one-way Analysis of Variance showed that total Cornell Scale scores distinguished groups of demented subjects with no depression, probable depression, and definite major depression (Kappa: 0.60 - 0.97). There was significant correlation between total Cornell Scale scores and rank order of the Research Diagnostic Criteria (RDC) depression subtypes ($r = 0.83$; $p < .001$). A further validity study was conducted by comparing the Cornell Scale scores of nine hospitalised demented subjects with major depression. The Cornell score obtained on discharge was significantly lower than that obtained on admission (Wilcoxon matched-pairs signed-ranked test: $p < .005$).

UTILISATION: Menon et al (2001); Teresi et al, (2001); Hendrix, (2002) & Vespa, (2002) are just some of the researchers that have utilised the Cornell Scale as a measure of depression within residential and nursing homes, for those individuals with dementia.

From the volume of studies cited above, it is evident that the scale has been successfully used to measure depression in individuals with dementia, and therefore the Cornell Scale is an appropriate measure for this study.

2.4.5 (b) *Rating Anxiety in Dementia (RAID)*. (Shankar, Walker, Frost & Orrell, 1999) -
(used as part of the interview component with staff)

DEVELOPMENT AND STRUCTURE: The RAID was developed to measure anxiety levels in individuals with Dementia. The scale is composed of four sub scales and each of the items are rated on a 4-point scale. A cut off point (set at a score of 11 or more) which suggests significant clinical anxiety.

RELIABILITY & VALIDITY: Inter-rater reliability was explored using two raters assessing 33 patients. The kappa value among the individual items ranged from .53 - 1 and the OAG from 80-100%. The internal consistency of the scale being 0.83. Content validity was explored by sending the scale to 24 professionals in the older adult service. They were given a copy of the information sheet about the scale, the scale itself and a questionnaire consisting of five questions about the RAID².

Overall, 14 of 24 felt all the items were important. Seven felt that the explanation of phobia and panic attacks was unsatisfactory. One mentioned sleep not being important and one other mentioned the inclusion of other symptoms.

The RAID was compared to the Anxiety scales: Clinical Anxiety Scale – CAS (Snaith et al, 1982) and the Anxiety Status Inventory – ASI (Zung, 1971), to establish

² Qu 1: Are there any additional topics which you fell should be included?
Qu 2: Do any topics need more explanation?
Qu 3: Do you foresee any specific difficulties in using the scale?
Qu 4: Do you think that all topic are important?
Qu 5: Do you have any additional comments?

concurrent validity. The performance of the RAID was also compared with the Cornell Scale of Depression in Dementia the concurrent validity was good.

UTILISATION: Wetherall (2002) and Davis, Moye & Karel (2002) both utilised the RAID to measure anxiety in older adults. The former looked at anxiety in relation to mental health screening for older adults in primary care and the latter used the measure to assess the effectiveness of behaviour therapy by investigating the individuals' pre and post anxiety scores.

Considering the utilisation of the RAID in studies which have investigated anxiety in older adult settings, it was thought a justifiable measure for this study.

2.4 v (c) *The Behaviour Assessment Scale for Later Life (BASOLL)*. (Brooker, Sturmey, Gatherer & Summerbell, 1993) -(used as part of the interview component with staff)

DEVELOPMENT AND STRUCTURE: The BASOLL was developed to provide a screening tool to be used by staff on initial assessment with elderly clients. The BASOLL aimed to provide enough information for care planning regarding behavioural problems and provide a checklist for the behavioural symptomatology of the major disorder of old age.

The BASOLL consists of six sub-scales (self-care, memory and orientation, challenging behaviour, mood disturbances, sensory impairment and mobility), which total 37 individual items. The study utilised only mood disturbances for the BASOLL, as it was

felt that the other areas were either covered more thoroughly in the other measures, or were not felt to be useful within this study.

RELIABILITY & VALIDITY: The reliability was analysed using test-retest and interrater reliability. The test-retest reliability ranged from 0.84 - 0.94 and the interrater the reliabilities range from 0.63 - 0.84. The results show that all three scales achieved good test-retest and interrater reliability.

Criterion validity was again established for the sub-scales using one-way ANOVA's. All these were highly significant ($p < 0.001$) suggesting that the scales differentiate well being participants within the settings.

UTILISATION: The BASOLL has been utilised in routine clinical practice for over six years. It is used within inpatient psychogeriatric assessment wards, as a basis for care planning, and has also been used as part of an assessment for community respite units (Bush *et al.*, 1987), which is involved with dementia suffers with challenging behaviour.

Considering the utilisation of the BASOLL with individuals in residential settings with dementia, it was seen as an appropriate tool for this research.

2.4.6 Behavioural Measures

2.4.6 (a) *Challenging Behaviour Scale (CBS)*. (Moniz-Cook, Woods, Gardiner, Silver & Agar, 2001) - (used as part of the interview component with staff)

DEVELOPMENT AND STRUCTURE: The CBS was developed “to provide a measure of the effect of intervention for challenging behaviour which may target problematic residents behaviour and/or the challenge experienced” (Moniz-Cook et al, 2001). The scale consists of 25 individual items, determined through factor analysis, relating to different aspects of challenging behaviour. The incidence, frequency, difficulty and challenge of the behaviours are recorded. Incidence refers to whether the behaviour has occurred. If so, the difficulty and frequency of that behaviour is rated, on a 4-point scale. Challenge is composed of the sum of the difficulty and frequency.

RELIABILITY & VALIDITY: The internal consistency of the scale, including all the items, is 0.82. There are four studies that investigate inter-rater reliability.³ In the first study there was a wide variation between raters. In the second study there was no improvement in reliability. In the third and fourth study reliability was good.

Criterion validity was investigated by correlating the total scores for each of the four CBS measures⁴ with the reported presence of dementia in residents (see Moniz-Cook et al, 2001). Point biserial correlation coefficients for each of the four CBS ratings against

³ 1: 22 residents from each of the homes in the national ‘sample were selected. Two members of staff, working different shifts, completed the scale independently.

2: 49 residents in a nursing home participated, and the matron and key-worker acted as raters. Matron repeated the scale 10 days after the initial rating.

3: Staff received a training programme on the aetiology and management of challenging behaviour in dementia. Inter-rater reliability was carried out with the matron and the key-worker.

4: Staff were divided into 2 groups of 3. each group completed the scale on the basis of their group agreement.

⁴ Incidence, frequency, difficulty and challenge

presence of Dementia were moderate. Concurrent validity was explored by comparing the CBS total scores with subscales of the CAPE-BRS (Pattie & Gilleard, 1979). The correlation and significance levels were as follows: Social Disturbance $r = 0.69$, $p < 0.001$ (moderate to strong relationship), Communication Difficulties $r = 0.08$, $p < 0.426$, Apathy $r = 0.36$, $p < 0.001$ (weak relationship); Physical Disability $r = -0.02$, $p < 0.845$. Predictive validity was measured by comparing CBS challenge scores with observations of challenging resident behaviour within the setting. Two studies were used here.⁵ The Pearson's Correlation Coefficient and significance levels for CBS score and observations for both studies are as follows: Study 1: $r = 0.61$, $p = 0.05$ (suggesting a moderate – strong relationship). Study 2: $r = 0.41$, $p = .05$ (suggesting a moderate correlation)

Norms were established by correlations between CBS measures. There were strong correlation for incidence and challenge: $r = 0.78$ and for frequency and challenge: $r = 0.90$.

UTILISATION: The CBS was developed to provide a comprehensive scale that is easy to use, to fill the void that existed in psychometric measure investigating challenging behaviour and older adults. It only recently developed and therefore has not been utilised in many research studies. However, it has good psychometric properties and explores behaviour relevant to the personality modes within this study. It is therefore seen as an appropriate measure for this study.

⁵ Study 1: Used the “national sample”. 9 out of 3 homes consented and 24 residents were randomly selected. Two raters made simultaneous observations (inter-rater reliability was good: $r = .95$).

Study 2: 24 residents with dementia living in two local authority specialist Elderly Mentalli Ill (EMI) resource homes was used.

2.4.6 (b) *Challenging Behaviour Observational Scale (CBOS)*, (Duggan & Richards, 2000) - (used as the observational scale for the observational component)

DEVELOPMENT & STRUCTURE: The CBOS is an observational scale with the purpose of recording an increased range of challenging behaviours and to incorporate the well-being / ill-being from the Dementia Care Mapping (DCM) (Bradford Dementia Group, 1997). It provides detailed operational observational rating of the activity (or lack of activity) the resident is engaged in; the interactions which take place with the other residents', staff and others within the home; whether is interaction was initiated by the resident and whether the initiation or response was either negative, positive or neutral and the well-being / ill-being scores. Well-being is measured on an ordinal scale for -5 to +5 (+5 - exceptional well-being with high levels of engagement, self-expression and social interaction, +3 - considerable well-being, interaction or initiation of social contact, +1 - coping adequately with the present situation, no signs of ill-being observable, -1 - slight ill-being visible, for example boredom, restlessness and frustration, -3 - considerable ill-being, for example sadness, fear or sustained anger, -5 - extremes of apathy, withdrawal, grief or despair). A mean well-being is derived from these scores.

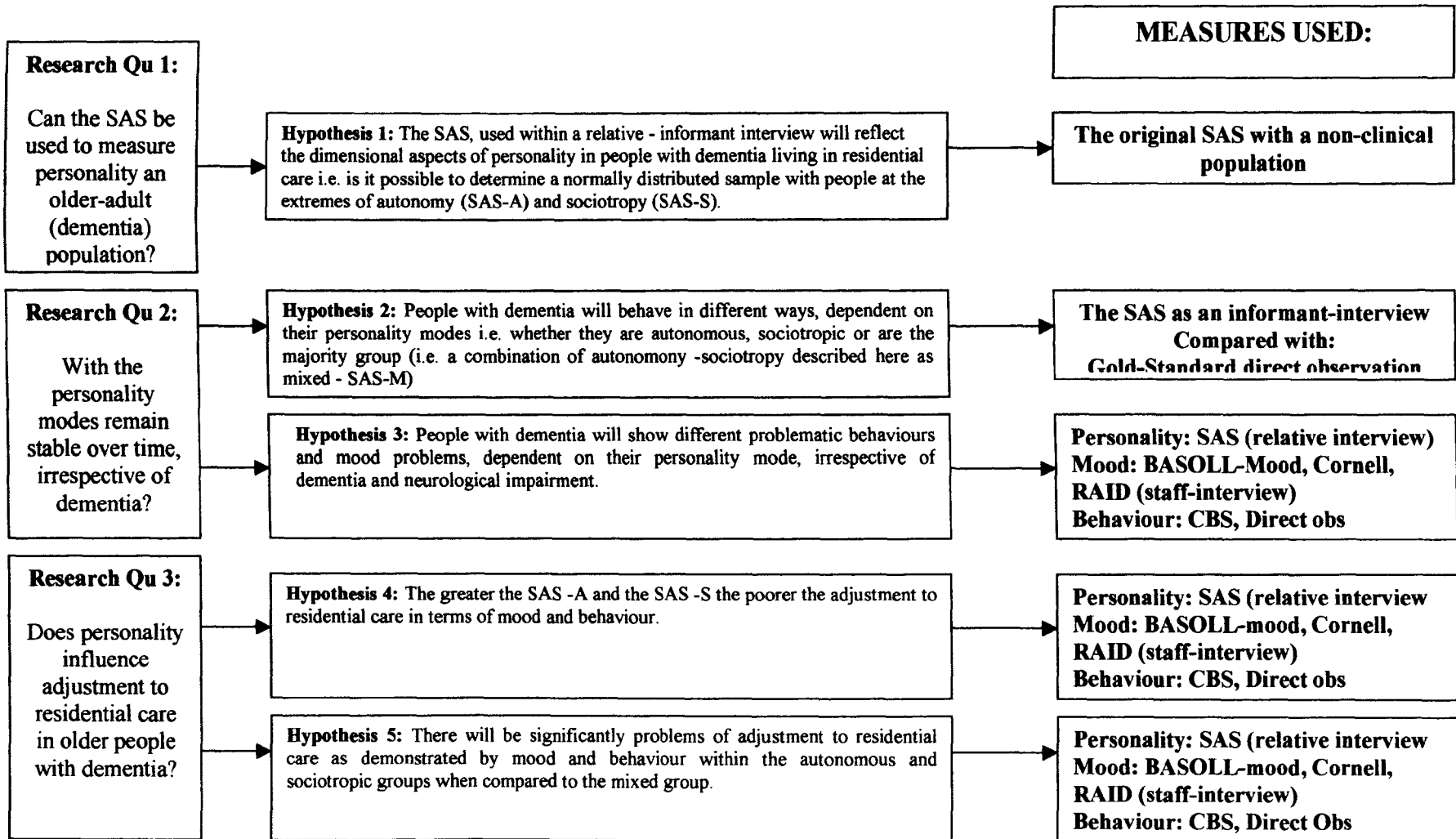
The CBOS was developed from a combination of different observational scales. The activity categories were taken from the Quality of Interaction Schedule (QUIS) - (Dean et al, 1993) and were extended to achieve more subtle evaluation. The interaction categories were taken from the adaptation of the QUIS (Proctor et al, 1998) and further extended to achieve more variation. Time sampling of resident behaviour is used (40 seconds per minute) with 20 seconds for recording, however, should challenging

behaviour occur within the 20 second recording time it is noted and counted in the calculations. Thus it can be used for a short period of time, as little as one hour.

The CBOS was adapted slightly to focus on the aspects of theory in which this research is interested i.e. social-relationships in terms of interaction. Therefore, for this study the observations noted whether the interaction was actively avoidant. This was not recorded as a problematic behaviour because of the social relationship focus of the research. In addition, the study made a distinction between different types of wandering, for example those that showed anxious, restless wandering compared to those who showed more purposeful wandering. Any problematic behaviours that occurred were also noted, such as seeking or demanding attention, anxious wandering or clinging, aggressive incident or purposeful wandering. Both the amount of time spent displaying these behaviours were recorded and the frequency of each different type of behaviour. The author and one independent rater established the reliability of the observational tool and the inter-rater reliability using Cohen's Kappa statistics was 0.84.

UTILISATION: The CBOS has been utilised in a case study, comparing the observations of the CBOS to that of the DCM (Duggan & Richards, 2000). Due to the comparative infancy of the measure, it has not been utilised in many studies. However, it was seen as appropriate for this research because the shorter time-sampling period allowed the observational technique to be used within this research (observational length, two hours). In addition, it focuses on interaction, which is the central feature of this research.

Figure 2: How the measures relate to the research questions and hypotheses



2.5 Statistical Analysis

Data was analysed using SPSS (Statistical Package for the Social Sciences, Norusis & SPSS Inc, 1993). The following statistical techniques were used:

- To establish the whether the SAS-A and SAS-S can discriminate personality modes in an older adults population with dementia Kolmogorov-Smirnov Test of Normality and confidence-interval analysis were used.
- To establish whether the autonomous and sociotropic personality modes are consistent over time, Mann-Whitney U test were used to compare the autonomous group with the sociotropic group. Correlations were used to investigate the relationship between high scores on the SAS-A and SAS-S and behaviour and mood presentation. Independent T-Tests were used to compare the autonomous and sociotropic groups on presentation of mood.
- To investigate the effect of personality on adjustment to residential care, correlations were used to explore the relationships between the total scores on the SAS-A and SAS-S and increases in overall problematic behaviours and mood problems. Mann-Whitney U tests were used to compare the sociotropic and autonomous groups to the mixed group to discover whether there was any overall different in problematic behaviour and mood problems. Spearman Rho correlations and a Chi-squared test were used to explore the ill-being / well-being of the three groups.

CHAPTER 3

RESULTS

63 older adults, with dementia, living in seven different residential homes, were recruited for this research (see method, section: 2.2 (iii)). For some of the analysis it was necessary to split the 63 participants into three groups: those with extreme scores (i.e. those with a scores greater than 2000 - total scores two or more standard deviations away from the mean) on either the autonomous scale or the sociotropic scale, and those with lower scores on both the autonomous and sociotropic scales (i.e. total scores less than 2000 for both the autonomous and sociotropic questions). The three groups were called the autonomous group (SAS-AG), the sociotropic group (SAS-SG) and the mixed group (SAS-MG), respectively. The data for the rationale for sub-group discrimination is presented in section 3.2, where the first research question is considered. This was to allow examination of significant differences, if they exist, between the personality modes and the mood and behaviour. For other parts of the analysis, the total scores achieved on both the autonomous sub-scale (SAS-A) and sociotropic sub-scale (SAS-S) were used. This was to enable the research to discover any relationships between the two-personality modes and the dependent measures used.

Section 3.1 presents descriptive data of the older adult population, including demographic information and data on the range of measures used.

Section 3.2 explores the data for the distribution of the SAS-A and SAS-S scores to examine the first research questions i.e. Can the SAS discriminate personality modes in

an older adult (dementia) population? Following this, section 3.3 explores the outcome measures in relation to the personality modes.

Section 3.4 examines the second research question i.e. Do personality modes remain stable, irrespective of neurological impairment in older people with dementia living in residential homes?

Section 3.5 examines the third research question i.e. Does personality influence psychological adjustment in older people with dementia living in residential care?

3.1 DESCRIPTIVE STATISTICS

Section 3.1.1 summarises the demographic data pertaining to the older adult (dementia) population (N=63). Section 3.1.2 summarises the descriptive data for the outcome measures used.

3.1.1: A Summary of the demographic data for the participants in the older adult population (N = 63)

Table 1 below, summarises the demographic data (N= 63). Within the sample, 92% of the participants were female. The age ranged from 65-97 years, the mean being 84.38 years. 60 out of 63 (95%) of the informants were children of the residents. Of these 39 (61%) were daughters of the residents, 21 (39%) were sons, 2 (3%) were nieces and one (2%) was a sister.

Table 1 Summary of demographic data pertaining to the older adult (dementia) population (N=63)

Variable		Frequency of Participants
Age	65-70	1
	71-75	4
	76-80	13
	81-85	16
	86-90	17
	91-95	9
	95-100	3
Sex	Female	58
	Male	5
Place of Resident	Hull & East Riding (for more than 20 years)	58
	Other parts of Yorkshire	4
	The South	1
No. of time married	Never	2
	Once	57
	Twice	3
	Three times	1
No. of Children	0	3
	1	18
	2	12
	3	13
	4 or more	17
Previous Profession	Housewife / mother	39
	Shop Worker / Hair dresser	7
	Factory Worker	6
	Cleaner	5
	Teachers	3
	Dock Worker	1
	Business	2
Religion	Church of England	38
	Catholic	12
	No religion	13
Length of stay	6months-1yrs	16
	2yrs-3yrs	39
	4yrs-5yrs	8
Medication	Yes	63
	No	0

3.1.3 Descriptive data for baseline and outcome measures for the older adult (dementia) population (N=63)

This section summarises the descriptive data for the baseline and outcome measures for the older adult (dementia) population under investigation within this research. Firstly pertaining to the SAS, secondly to the CAPE-CAS/BRS, thirdly to the direct observations, fourthly the CBS and finally the mood measure (BASOLL-mood, Cornell and RAID (table 2-6)

Table 2 below summarises the total mean, median and SD of the scores for the older adult (dementia) population (N=63) on both the SAS-A and the SAS-S sub-scale.

Table 2: The mean, median and SD of the older adult population (N = 63) on the SAS-A and SAS-S.

Total scores, (N = 63)	Mean	Median	SD
SAS-A	1576	1500	527.690
SAS-S	1487	1575	649.439

Table 3 below summarises the total mean, median and SD on the CAPE-CAS / BRS. As shown, the total mean of the on the CAPE-CAS is below 8. The CAPE-BRS mean scores for the population is high. The mean for the dependency rating is four, which is equivalent to a dependency rating of D on the CAPE-CAS / BRS.

Table 3: Descriptive data for the CAPE-CAS / BRS for the older adult (dementia) population (N = 63)

CAPE – CAS / BRS		
(N = 63)		
Cognitive: CAPE-CAS	Mean	3.87
	Median	4.00
	SD	2.865
Behaviour function: CAPE-BRS	Mean	17.84
	Median	17.00
	SD	4.975
Dependency Rating	Mean	4.22
	Median	4.00
	SD	.659

Table 4, 5 and 6 below summarise the mean, median and SD for the adjustment measures used within this research (i.e. direct observations, CBS and mood measures). As is evident from table 5 below, there are fewer participants observed (N = 47) than participated in this research (N = 63). This was due to time constraints of the research.

Table 4: Descriptive data for the direct observations for the older adult (dementia) population (N = 47)

OBSERVED BEHAVIOUR	AMOUNT OF TIME
	47
Doing nothing: Mean (SD) Median	12.04 (21.409), .00
Asleep: Mean (SD) Median	24.70 (29.492), 12.00
Not Observe (room) :Mean (SD) Median	24.66 (39.0489), .00
Watching, lounge: Mean (SD) Median	26.04 (24.426), 18.00
Food, no interact: Mean (SD) Median	4.55 (5.544), 2.00
Wander, no interact:Mean (SD) Median	3.36 (8.739), .00
Total Interact: Mean (SD) Median	33.79 (25.705), 32.00
Total (+) interact: Mean (SD), Median	20.51 (26.760), 8.00
Total (-) interact: Mean (SD), Median	7.02 (11.735), 2.00
Wander (+) inter: Mean (SD), Median	2.26 (8.694), .00
Wander (-) inter: Mean (SD), Median	1.96 (4.854), .00
Eating (+) inter: Mean (SD), Median	4.43 (6.500), .00
Eating (-) inter: Mean (SD), Median	.68 (1.576), .00
Purpose Self-care: Mean (SD), Median	9.36 (10.001), 8.00
Purpose Social: Mean (SD), Median	17.19 (23.456), 8.00
Problematic behav: Mean (SD), Median	4.91 (8.675), 2.00
Avoidant / Aggress: Mean (SD), Median	2.40 (4.994), .00
Attention / Anxious: Mean (SD), Median	2.49 (5.141), .00
WELL-BEING / ILL-BEING	RATING
Overall: Mean (SD), Median	-.51 (-1.00), 1.559

Table 5: Descriptive data for the CBS for the older adult (dementia) population (N = 63)

CHALLENGING BEHAVIOURS N = 63	CHALLENGE RATING
Physical Aggression: Mean, (SD), Median	1.10 (2.722), .00
Verbal Aggression: Mean, (SD), Median	1.68 (3.459), .00
Self-harm: Mean, (SD), Median	.27 (1.167), .00
Dangerous behaviour: Mean (SD), Median	.17 (.794), .00
Lack of motivation: Mean, (SD), Median	1.94 (2.475), 1.00
Lack of occupation: Mean (SD), Median	2.24 (2.563), 1.00
Wandering: Mean, (SD), Median	1.97 (2.805), .00
Preservation: Mean, (SD), Median	.90 (2.282), .00
Suspiciousness: Mean, (SD), Median	.86 (2.162), .00
Non-compliance: Mean, (SD), Median	1.29 (3.087), .00
Manipulation: Mean, (SD), Median	.50 (1.830), .00
Sleep: Mean, (SD), Median	2.03 (2.771), 1.00
Clinging: Mean, (SD), Median	1.22 (2.305), .00
Restlessness: Mean (SD), Median	2.43 (2.798), 1.00
Demanding Attention: Mean, (SD), Median	1.79 (3.783), .00
Shouting: Mean, (SD), Median	1.78 (3.761), .00
Scream/Cry out: Mean, (SD), Median	1.38 (3.451), .00

Table 6: Descriptive data for the mood measures (BASOLL-mood, Cornell & RAID)
for the older adult (dementia) population (N = 63)

MOOD MEASURES		
Mood: BASOLL-mood	Mean	4.46
	Median	3.00
	SD	4.561
Mood: Cornell	Mean	10.62
	Median	7.00
	SD	8.533
Mood: RAID	Mean	12.02
	Median	9.00
	SD	10.458

3.2 CAN THE SAS DISCRIMINATE PERSONALITY MODES?

In this section the first research question will be examined, with the following hypothesis:

1. The SAS, used within a family - informant interview will reflect the dimensional aspects of personality in people with dementia living in residential care.

To examine whether the SAS can discriminate personality modes in an older adult (dementia) population, it is necessary to consider how the SAS has discriminated personality in other populations. The SAS consists of 60 questions, 30 pertaining to the autonomous personality mode (SAS-A) and 30 to the sociotropic personality mode (SAS-S). Each of the questions are scored from 0 – 100. The higher the score on either the SAS-A or SAS-S, the more likely the individual is to have an autonomous or sociotropic personality mode, and reflect behaviours associated with these (see introduction, section 1.4.6). Because there are 30 questions and the highest score per question is 100, the maximum total for either the SAS-A or SAS-S is 3000, with a mean of 1500. What would be expected is that the majority of people would score around the mean (neither highly autonomous nor highly sociotropic) and fewer people score at the extreme (i.e. highly autonomous or sociotropic). Consequently, the population reflects a normal distribution with the expected mean (1500) falling within the confidence interval. If the distribution of the scores on the SAS for the older adult (dementia) populations, reflects normal a distribution (with the expected mean falling within the confidence intervals) then validity of the SAS can be established. Therefore, section 3.2.1 examines the distribution of the total scores of the older adult (dementia)

population, to discover whether the population is normally distributed. In addition, as stated, some of the analysis involves dividing the population into three groups. Section 3.2.2 examines the scores on the SAS-A and SAS-S, to discover whether three groups can be.

3.2.1 Does the SAS reflect the dimensional aspects of personality the older adult (dementia) population?

Figure 3, figure 4 and table 7, investigates the distribution of the items on the SAS for the older adult (dementia) population (N = 63). As seen in Figure 3, the population appears to be skewed to the autonomous modes, with more participants scoring over 1500. This may be due to the informant nature of the interview i.e. the daughters and sons may have seen their parents as more independent. However, as can be seen in table 10, overall the sample is normally distributed. Furthermore, the confidence intervals for both the autonomous and sociotropic group are 1443.29- 1709.09 and 1324.14 – 1651.26, respectively. This indicates that this data is equivalent to that of the original clinical sample, and can be generalised.

Fig 3: Histogram showing the distribution of the Autonomous scores, for the older adult (dementia) population (N=63), on the SAS

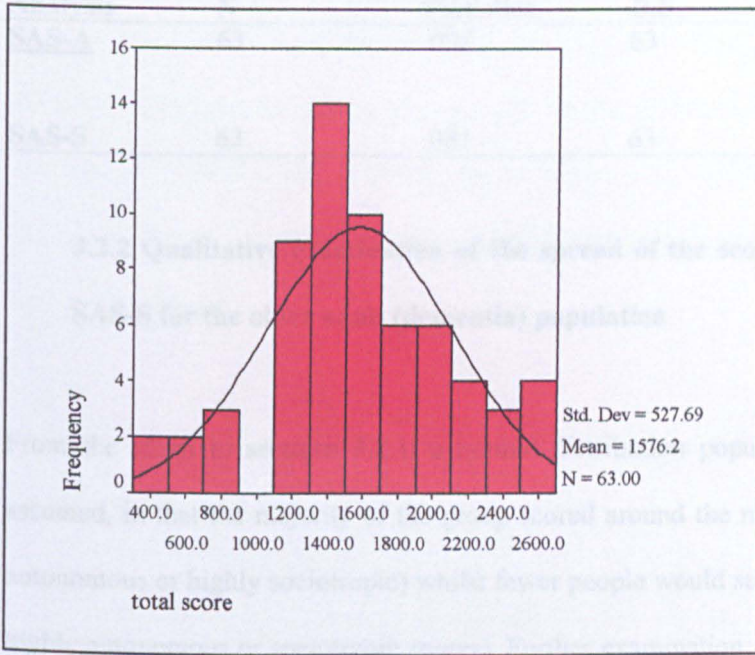


Fig 4: Histogram showing the distribution of the Sociotropic scores, for the older adult (dementia) population (N=63), on the SAS

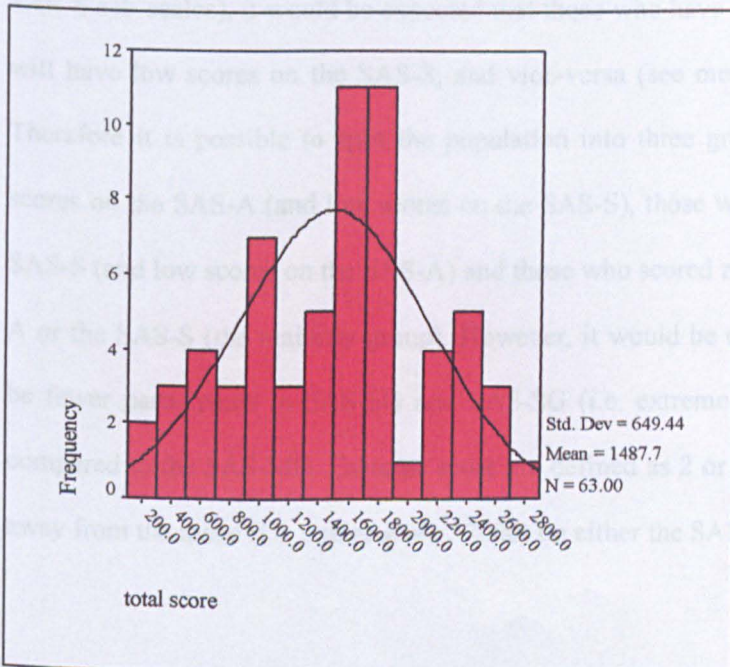


Table 7: Results of a Kolmogorov-Smirnov Test of Normality of the older adult sample

(N = 63).

Analysis	N	Statistics	D.F.	P.
SAS-A	63	.098	63	.200
SAS-S	63	.081	63	.200

3.2.2 Qualitative examination of the spread of the scores on the SAS-A and SAS-S for the older adult (dementia) population

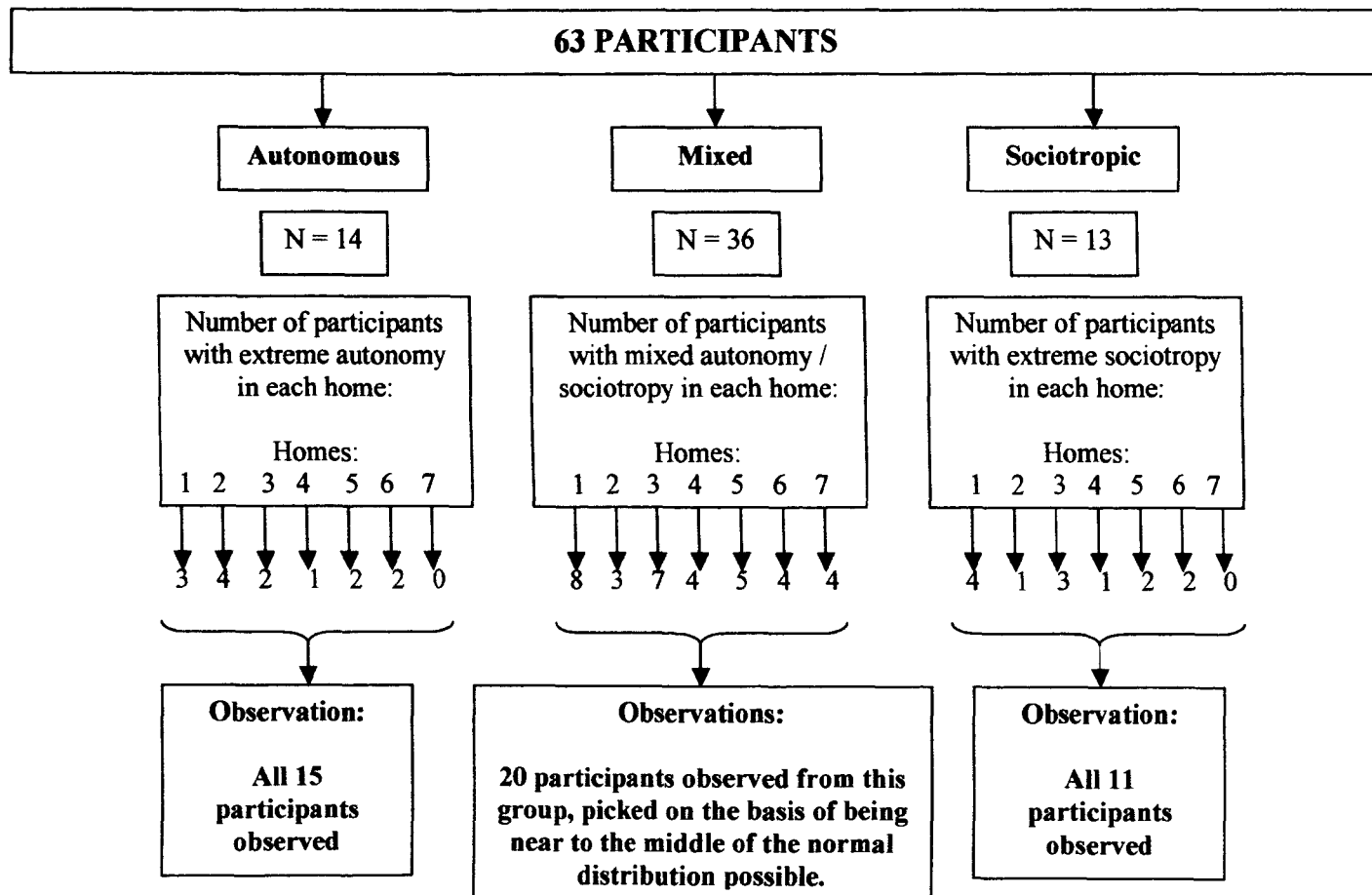
From the result in sections 3.2.1, a normal distribution population principle can be assumed, in that the majority of the group scored around the mean (i.e. neither highly autonomous or highly sociotropic) whilst fewer people would score at the extremes (i.e. highly autonomous or sociotropic scores). Further examination is necessary to discover whether there can be differentiations made between three groups. Although the autonomous and sociotropic scores are measured on separate scales (the SAS-A and SAS-S sub-scales), it would be expected that those who have high scores on the SAS-A will have low scores on the SAS-S, and vice-versa (see methodology, section 2.4.3). Therefore it is possible to split the population into three groups, those with extreme scores on the SAS-A (and low scores on the SAS-S), those with extreme scores on the SAS-S (and low scores on the SAS-A) and those who scored neither highly on the SAS-A or the SAS-S (the majority group). However, it would be expected that there would be fewer participants in SAS-SG and SAS-SG (i.e. extreme ends of the dimensions) compared to the SAS-MG. Extreme score are defined as 2 or more standard deviations away from the mean (i.e. a total score >2000) on either the SAS-A and SAS-S.

As seen in table 8 below, it is possible to divide this population into the three groups, and as expected there are fewer participants in the SAS-AG (14 participants) and SAS-SG (13 participants) compared to the SAS-MG (36 participants). The results also confirm that those who scored highly on the SAS-A (>2000) had a low score for the SAS-S (<1000) and those who scored highly on the SAS-S (>2000) had a low score on the SAS-A (<1000). The majority means score was around equal on both sets of questions. Figure 5 summarises these groups in relation to the seven residential homes and the hypotheses.

Table 8: The spread of scores on the SAS-A and SAS-S for the older adult (dementia) population (N=63)

	N	SAS-A	SAS-S
SAS-AG	N = 14		
Mean score:		2282	757.14
SAS-SG	N = 13		
Mean score:		816	2410
SAS-MG	N = 36		
Mean score:		1522	1464

FIGURE 5: DIAGRAMATIC REPRESENTATION OF THE GROUP OF PERSONALITY MODES



3.2.4 Summary of the results pertaining to research question 1:

The predictions were that the older adult (dementia) population would reflect the dimensional aspects of the SAS as follows: 1) The populations would be normally distributed, with the majority of participant scoring below two standard deviations away from the mean. 2) The expected mean (1500) would fall in the confidence intervals. 3) The population would separate into three groups. The results showed that:

- The SAS as a measure of personality appears to be normally distributed for the older adult (dementia) population.
- The confidence intervals include the expected mean score for the SAS (i.e. 1500).
- The scores on the SAS can be used to differentiate three groups of personality modes i.e. the autonomous group (SAS-AG) (with a score two or more standard deviations away from the mean on the SAS-A) the sociotropic group (SAS-SG) (with a score two or more standard deviations away from the mean on the SAS-S) and the majority, mixed group (SAS-MG) (with a score less than two standard deviations away from the mean).
- That the majority of participants fall, as predicted, less than two standard deviations away from the mean and that fewer participants would achieve score of 2 or more standard deviations away from the mean

3.3 EXPLORATION OF THE PERSONALITY MODE GROUPS IN RELATION TO THE OUTCOME MEASURES

The aims of this section are to:

- i) Examine all measures for each of the three personality groups, as defined by the cut-off points in the previous section.
- ii) Examine the data for each of the measures used to determine whether they satisfy the criteria necessary for the use of parametric tests.
- iii) Examine whether there are differences between the three groups (SAS-AG, SAS-SG and SAS-MG) on cognition or dependency, which could compromise the findings.

3.3.1: Description of participant measures across personality modes

Section 3.2.3 has shown that it is possible to divide the population in three groups: the SAS-AG, SAS-AG and the SAS-MG. The section will now examine each of the measures used within this research with each of the three personality groups. The measures of behaviour were both the direct observations and the CBS. Measures of mood were the BASOLL-mood, Cornell Scale of Depression and the RAID. Descriptive data for each of these personality modes is seen in tables 9-11 respectively.

Table 9 describes the direct observations. Table 10 summarises the descriptive data of the second behaviour measure, the CBS, for all the participants in the older adult population (N = 63) using the overall challenge score (see Method, section 2.4 (vi) a).

Table 11 describes all three mood measures (BASOLL-mood, Cornell and RAID) across the three personality modes

Table 11: Descriptive data from the three mood measures pertaining to the three personality modes:

		(SAS-AG): N=14	(SAS-SG): N=13	(SAS-AG): N=36
Mood: BASOLL	Mean	7.93	9.15	1.42
	Median	7.00	10.00	1.00
	SD	3.812	4.525	1.382
Mood: Cornell	Mean	17.29	20.49	4.47
	Median	19.50	20.46	4.00
	SD	7.130	5.577	2.613
Mood: RAID	Mean	15.57	26.46	5.67
	Median	14.50	27.00	4.00
	SD	6.958	10.982	3.972

Table 9 Descriptive data from the direct observation pertaining to the three personality modes:

	Autonomous (SAS-AG): N = 14	Sociotropic (SAS-SG): N = 13	Mixed (SAS-MG): N = 20
AMOUNT OF TIME:			
Doing nothing: Mean (SD) Median	9.86 (19.159), 5.00	21.38 (26.962), 18.00	7.50 (17.733), .00
Asleep: Mean (SD) Median	15.36 (26.052), .00	32.62 (35.902), 30.00	26.10 (26.767), 18.00
Not Observe (room) :Mean (SD) Median	58.07 (47.550), 56.86	15.54 (33.706), .00	7.20 (15.056), .00
Watching, lounge: Mean (SD) Median	14.14 (19.350), 9.00	17.23 (18.753), 12.00	40.10 (24.508), 38.00
Food, no interact: Mean (SD) Median	4.71 (6.207), .00	5.23 (4.658), 6.00	4.00 (5.804), 1.00
Wander, no interact:Mean (SD) Median	2.43 (3.857), 1.00	7.85 (15.502), .00	1.10 (1.774), .00
Total Interact: Mean (SD) Median	22.86 (17.815), 23.00	30.00 (17.815), 20.00	43.90 (28.884), 37.00
Total (+) interact: Mean (SD), Median	2.57 (6.991), .00	14.15 (19.672), 8.00	37.20 (29.964), 30.00
Total avoidant interact: Mean (SD), Median	18.14 (16.238), 17.00	3.08 (3.427), 2.00	1.80 (3.888), .00
Wander (+) inter: Mean (SD), Median	.57 (2.138), .00	1.08 (2.100), .00	3.50 (6.833), .00
Wander avoidant inter: Mean (SD), Median	7.00 (15.166), 2.00	.62 (1.710), .00	NA
Eating (+) inter: Mean (SD), Median	.86 (2.179), .00	2.77 (4.867), 2.00	8.00 (7.705), 7.00
Eating (-) inter: Mean (SD), Median	1.57 (2.377), .00	.46 (.877), .00	.20 (.894), .00
Purpose Self-care: Mean (SD), Median	12.00 (14.739), 7.00	4.31 (4.956), 2.00	10.80 (7.295), 11.00
Purpose Social: Mean (SD), Median	2.57 (6.99), .00	12.02 (17.727), 8.00	30.40 (27.289), 21.00
Total amount time: Mean (SD), Median	7.50 (8.510), 5.50	8.31 (12.592), 4.00	.90 (1.651), .00
Avoidant / Aggress: Mean (SD), Median	6.79 (6.897), 4.00	1.08 (3.328), .00	.20 (.616), .00
Attention / Anxious: Mean (SD), Median	1.00 (2.219), .00	6.85 (7.957), 4.00	.70 (1.625), .00
WELL-BEING / ILL-BEING RATING:			
Overall: Mean (SD), Median	-1.64 (1.393), -2.00	-1.00 (1.291), -1.00	1.0 (1.214), 1.00 2.0

Table 10: Descriptive data from the CBS pertaining to the three personality modes

	Autonomous (SAS-AG): N = 14	Sociotropic (SAS-SG): N = 13	Mixed (SAS-MG): N = 36
Physical Aggression: Mean, (SD), Median	2.93 (4.524), .50	1.83(2.949), .50	.16 (.602), .00
Verbal Aggression: Mean, (SD), Median	4.36 (4.684), 4.00	3.25 (4.515), 2.50	.16 (.553), .00
Self-Harm: Mean, (SD), Median	.57 (2.138), .00	.62 (1.261), .00	.03 (.167), .00
Dangerous Behav: Mean, (SD), Median	.57 (.832), .00	.23 (.832), .00	NA
Lack of motivation: Mean, (SD), Median	4.14 (3.231), 4.00	2.17 (1.850), 2.50	1.03 (1.724), .00
Lack of occupation: Mean, (SD), Median	3.86 (3.655), 4.00	2.46 (2.066), 3.00	1.53 (1.905), 1.00
Wandering: Mean, (SD), Median	3.14 (2.797), 4.00	3.42 (3.423), 3.50	1.05 (2.248), .00
Preservation: Mean, (SD), Median	1.71 (3.338), .00	2.31 (3.011), 1.00	.22 (.732), .00
Suspiciousness: Mean, (SD), Median	2.43 (3.756), .50	1.17 (1.801), .00	.16 (.688), .00
Non-compliance: Mean, (SD), Median	3.57 (5.598), 1.00	1.83 (2.038), 1.50	.24 (.760), .00
Manipulation: Mean, (SD), Median	1.21 (3.286), .00	1.17 (2.028), .00	.05 (.229), .00
Sleep: Mean, (SD), Median	3.29 (4.264), 2.50	2.17 (2.623), 1.00	1.32 (1.684), 1.00
Clinging: Mean, (SD), Median	.86 (2.316), .00	3.58 (2.746), 4.00	.59 (1.607), .00
Restlessness: Mean, (SD), Median	3.29 (3.074), 4.00	4.38 (2.815), 4.00	1.39 (2.195), 1.00
Demanding Att: Mean, (SD), Median	2.29 (4.697), .00	5.42 (4.522), 4.00	.38 (1.977), .00
Shouting: Mean, (SD), Median	4.07 (5.095), 2.50	3.85 (5.064), 4.00	.14 (.426), .00
Scream/Cry out: Mean, (SD), Median	3.29 (5.283), .00	3.08 (4.502), 2.50	.05 (.229), .00

3.3.2: Sample distribution on the measures

In this section the results of examination of the distribution of all the dependent measures, using the Kolmogorov-Smirnov test, will be presented. The purpose of this is to establish whether the data meets one of the criteria for the parametric investigation i.e. whether the data is normally distributed. Appendix IV shows the distribution for each of the measures as follows: CAPE-CAS/BRS, BASOLL-mood, Cornell, RAID, CBS and direct observations using the Kolmogorov-Smirnov tests.

It is evident from the Kolmogorov-Smirnov tests that there are few populations that are normally distributed. The results from the CAPE-CAS/BRS show that only the autonomous group is normally distributed in the CAS and only the sociotropic in the BRS. Because the groups will be compared, a non-parametric analysis will be used (i.e. Kruskal-Wallis when comparing three or more groups or Mann Whitney U when comparing only two groups).

For all mood measures (BASOLL - mood, Cornell and RAID) both the sociotropic and autonomous groups are normally distributed, however, the mixed group is not. Therefore, when any of the analysis involves the mixed group, a non-parametric test will be appropriate. When comparing autonomous and sociotropic, a parametric test can be used (i.e. t-test).

For the behaviour measures, the distribution scores for the CBS show that only six of the possible 42 population are normally distributed, and none of the six are within the

same variable. This pattern is repeated within the direct observation. Therefore, when investigating CBS and the direct observations, non-parametric analysis will be used.

3.3.3: Examination of whether differences exist between the three groups (SAS-AG, SAS-SG & SAS-MG) on cognition or dependency

It is not possible to control for all the confounding variables within this study. However. One variable, which may have an influence on the results of this study, is the severity of dementia of the residents within the three groups. This is an important variable that might confound or compromise the conclusions that may be reached with the second research question (i.e. is personality stable irrespective of dementia?). Therefore, significant differences between the three groups, on measures of dementia severity, are explored here.

As can be seen in table 12 below, none of the participants scored above 8 on the CAS, regardless of the personality mode. In addition, the dependency ratings for each of the three groups is around 4, which is equivalent to grade D on the CAPE-CAS / BRS (see methodology, section 2.4.4).

Table 12: descriptive data concerning cognitive, mood and behaviour measures

		SAS-AG: N = 14	SAS-SG: N = 13	SAS-MG: N = 36
CAPE-CAS: Cognitive	Mean	5.21	3.08	3.62
	Median	6.00	3.00	4.00
	SD	2.539	2.746	2.975
	Min-	0 – 8	0 – 8	0 – 8
	Max			
CAPE-BRS: Behaviour function	Mean	20.21	18.67	16.68
	Median	19.00	18.50	16.00
	SD	4.089	5.123	4.972
Dependency	Mean	4.21	4.33	4.19
	Median	4.00	4.50	4.00
	SD	.426	.778	.701

A Kruskal-Wallis, for the CAS, indicates a chi-squared is 7.265, p-value .684 and for the BRS is .867, p-value .072. Therefore, neither the CAS or BRS scores are significantly different when each group is compared to each other. In fact, 87% of the sample scored either D or E for dependency level, irrespective of personality group.

Therefore, it is fair to conclude that the severity of dementia will not influence any group differences that might be found between the three groups, as there is no significant difference in either the cognitive, function or dependency levels of the participants within each of the three groups.

3.4 STABILITY OF PERSONALITY MODES OVER TIME

In this section the second research question will be addressed, with the following hypothesis:

People with dementia will behave in different ways and show different mood problems, dependent on their personality mode i.e. whether they have an autonomous or sociotropic personality mode, thus demonstrating that personality modes, which drive behaviour and mood, is stable irrespective of organic damage due to dementia.

It is expected that participants will behave differently and show different mood problems, dependent on their personality mode. Therefore this research investigates the stability of the personality modes by exploring whether there is in fact different presentation of mood and behaviour in the older adult (dementia) population, dependent on the personality mode. Furthermore, the autonomous group (SAS-AG) will show different presentation of behaviour and mood problems (BPSD) as compared with the sociotropic group (SAS-SG). As noted in the introduction (see section 1.4.6), it was expected that the SAS-AG would present with higher levels of withdrawn depression and levels of aggression, withdrawal, loss of interest and so on, whereas the SAS-SG would be expected to show higher levels of anxiety (Mak 2001) and show more attention-seeking, clinging, crying and so on. To explore this, section 3.4.1: investigates the different presentations of behaviour from the direct observation, firstly, by comparing the autonomous group (SAS-AG) – (N=14) and the sociotropic group (SAS-SG) - (N=13), and secondly investigating the relationship of the overall scores on

the SAS-A and SAS-S with different observed behaviours. Section 3.4.2 examines the behaviour presentation from the CBS (staff-report of residents challenge), firstly by comparing SAS-AG and SAS-SG, and secondly investigating the relationship of the overall scores on the SAS-A and SAS-S with different behaviours on the CBS. Finally, section 3.4.3 explores the different presentations of mood found when the SAS-AG and the SAS-SG are compared with one another (N = 63).

3.4.1: From the direct observations, do people behave differently dependent on their personality?

This section investigates whether there is evidence of different behaviour presentation dependent on the personality, from the direct observation. Section 3.4.1 a: investigates the significant differences in observed behaviours between the autonomous and sociotropic groups. Section 3.4.1 b: investigates the relationship between different observed behaviours and increased total scores on the SAS-A and SAS-S.

3.4.1 a: Are there significant differences between the observed behaviours and the sociotropic and autonomous groups?

To investigate whether there are significant differences between personality modes and behaviour, Mann-Whitney U tests were used with a Bonferroni Correction to adjust for the effect of the multiple analyses. The results shown in table 13, below, indicate that there are five significantly different behaviours reported. Examination of the mean (see table 9) suggests that of these five behaviours, the autonomous means are higher for isolation (i.e. remaining in their room), total avoidant interaction and purposeful

walking with negative interaction. Sociotropic means are greater for total interaction and social interaction. Thus it appears that the two groups, the SAS-AG (N=14) and the SAS-SG (N=13) behaviour differently in residential care, with the former showing greater isolated and social avoidant behaviour and the latter appear more gregarious.

Table 13: Mann-Whitney U tests comparing the autonomous and sociotropic groups on the direct observation

Activity/ Behaviour	Mann-Whitney	Z	P	Bonferroni Correction
ISOLATION / NO INTERACTION:				
In room	46.000	-2.318	.002	.016
Watching	80.500	-.523	.616	
INTERACTION:				
Total Interaction (+)	31.500	-3.066	.002	.016
Avoidant Interaction (-)	37.000	-2.650	.006	.048
Purposeful Walking (-) interaction	55.500	-2.005	.004	.032
Tea break (+) Interaction	60.000	-1.796	.141	
Purpose: Social	32.000	-3.040	.002	.016
TOTAL PROBLEMATIC BEHAVIOUR				
Total amount of time	84.500	-.322	.747	

3.4.1 b: Are there relationships between higher the scores on the SAS-A and SAS-S and different observed behaviours?

The section investigates whether there are any relationships between different observed behaviours and the total scores on the SAS-A and the SAS-S, with the expectation that as the total scores on the SAS-A and the SAS-S increase, there will be an increase in specific behaviours associated with those personality modes. This has been explored

using a Pearson's (2-tailed) Bivariate Correlation. The effect of multiple correlations was adjusted for by using the Bonferroni Correction. The results are shown in table 14, below.

Table 14: Pearson's r correlations for personality modes versus behaviour observed

	Autonomous Personality Scores	Sociotropic Personality Scores
	Amount of time	
Doing Nothing (in lounge)	$r = -.149$	$r = .216$
Asleep (in lounge)	$r = -.241$	$r = .181$
Not observable (in room)	$r = .412^{**}$	$r = -.453^{**}$
Watching (in lounge)	$r = -.066$	$r = .150$
Tea Break (no interaction)	$r = .003$	$r = .091$
Wandering (no interaction)	$r = -.239$	$r = .222$
Total amount of interaction	$r = -.052$	$r = .128$
Total positive interaction	$r = -.150$	$r = .183$
Total avoidant interaction	$r = .515^{**}$	$r = -.480^{**}$
Wandering positive interaction	$r = -.073$	$r = .009$
Wandering negative interaction	$r = .261$	$r = -.237$
Tea Break positive interaction	$r = .083$	$r = .171$
Tea Break negative interaction	$r = .279$	$r = -.248$
Purpose of interaction: Social	$r = -.138$	$r = .165$
Purpose: Self-care	$r = .241$	$r = -.224$
Problematic behaviour	$r = -.066$	$r = -.059$

* significant, $p < 0.01$ (2-tailed)

**significant, $p < 0.001$ (2-tailed)

As shown in table 14, for the isolation / no interaction category, a moderate, positive correlation were found between the “not observable, in room” behaviour and the total scores on the SAS-A, and this was also found to be moderately, negatively correlated with the total scores on the SAS-S. For the interaction category, the “total avoidant interaction” was found to moderately, positively correlate with the total scores on the SAS-A and moderately, negatively correlate with the total scores on the SAS-S.

These results showed that those with autonomous personality mode tended to be more isolated, showed avoidant social interaction, purposeful walking and more socially avoidant and “aggressive type” behaviour. Those with sociotropic personality modes tended to show more social interaction, seek attention and showed more “anxious type” behaviours. They spent less time in their room and did not avoid interaction. This suggests that people do behave differently depending on their personality.

3.4.2: Do staff reports and direct observation show differences in problematic behaviours of residents dependent on personality mode?

The section above investigated the difference in overall behaviour presentation. This section specifically investigates whether there is evidence of different problematic behaviour presentation dependent on the personality, from the scores on the CBS and from direct observations. Section 3.4.2 a: investigates the significant differences between the behaviours on the CBS and the autonomous and sociotropic groups. Section 3.4.2 b: investigates the relationship between different behaviours on the CBS and increased total scores on the SAS-A and SAS-S. Section 3.4.2 c: investigates the differences in the types of problematic behaviour observed.

3.4.2 a: Do staff report differences in problematic behaviours of the residents dependent on their personality modes?

To test the prediction that higher CBS scores would be associated with different personality modes, Mann-Whitney U tests were used. The sociotropic group showed significantly greater levels of demanding attention than the autonomous group (Mann-

Whitney = 11.003; p-value = .001). Otherwise, no association were found on individual behavioural items or the total CBS scores for either group. Therefore, staff appear to find the SAS-SG more demanding than the SAS-AG.

3.4.2 b: Do staff report relationships between the scores on the SAS-A and SAS-S and problematic behaviours of the residents?

The section investigates whether there are any relationships between each of the 25 reported different behaviours on the CBS and the total scores on the SAS-A and the SAS-S, with the prediction that as the total scores on the SAS-A and the SAS-S increase, there will be an increase in specific behaviours associated with those personality modes. This has been explored using a Pearson's (2-tailed) Bivariate Correlation. The effect of multiple correlations was adjusted for by using the Bonferroni Correction. It was found that, for the total scores on the SAS-A, there was a weak, positive correlation with lack of motivation (Pearson $r = .252$, $p = .047$) and non-compliance (Pearson $r = .311$, $p = .010$) and a weak-moderate, negative correlation with demanding attention (Pearson $r = .389$, $p = .002$). It was found that, for the total scores on the SAS-S, there was a moderate, positive correlation with demanding attention (Pearson $r = .413$, $p = .001$).

These results showed that those with higher scores on the SAS-A tend to lack motivation and show non-compliance, as well as actively not demanding attention. In contrast, those with higher scores on the SAS-S tend to demand attention. These results again do tend to suggest that people do behave differently depending on their personality.

3.4.2 c: Are there any significant differences in the types of observed problematic behaviours when the SAS-AG is compared to the SAS-SG?

Table 15 below, shows that there were no group differences when the SAS-AG was compared to the SAS-SG on the total amount of problematic behaviours shown. However, when close examination of the types of problematic behaviours was explored, there are significant differences between the frequencies of two particular types of observed problematic behaviour across the SAS-AG and SAS-SG, as shown in table 15, below. The means show that the SAS-AG showed significantly more avoidant / aggressive behaviour and the SAS-SG show significantly more attention-seeking / anxious behaviours (see table 10).

Table 15: Mann-Whitney U tests comparing the autonomous and sociotropic groups on the frequency of observed, problematic behaviour

Behavioural Categories / Group Comparisons	Mann-Whitney	Z	P
Avoidant / Aggressive	26.000	-3.351	.001
Attention / Anxious	30.000	-3.106	.004

3.4.3: Is there significant difference in the presentation of mood problems between the SAS-AG and the SAS-SG, measured by the BASOLL-mood, Cornell and RAID?

This section investigates the differences between the SAS-AG and SAS-SG on the three mood-measures (BASOLL-mood, Cornell and RAID), with the expectation that there will be different mood presentations associated with each of the two personality groups (i.e. SAS-AG and SAS-SG). This was investigated using an Independent T-tests (table 16).

Table 16: Independent t-test comparing the autonomous and sociotropic group on all three mood questionnaires

Mood Measure	T	df	P
BASOLL-mood	-763	25	.453
CORNELL	-1.282	25	.212
RAID	-2.861	25	.008

As can be seen from table 16, the only difference between the SAS-AG and SAS-SG was on the anxiety measure (RAID), suggesting that the SAS-SG has a higher level of anxiety than the SAS-AG.

The prediction that the SAS-AG would be different from the SAS-SG in the presentation of depression from staff-reports (see introduction, section 1.4.6) was not confirmed. However, the expectation that mood would differ across groups was substantiated for one of the aspects of mood, as the SAS-SG differed from the SAS-AG in terms of showing greater anxiety.

3.4.4 Summary of the results for research question 2:

The prediction was that individuals with high scores on either the autonomous or sociotropic questions (and therefore at the extreme ends of the dimensions) would show different behaviour and mood presentations when they were compared to one another. The results are summarised in figure 8. This following section will review the results found firstly looking at the results associated with the autonomous personality mode and then sociotropic personality mode.

3.4.4 a: Autonomous Personality Mode (SAS-AG)

- On the direct observation, the autonomous group (SAS-AG), as compared with the sociotropic group (SAS-SG) were found to spend more time isolated (in their room), more time avoidant of social interaction and more time purposely walking but with avoidant-type social interaction. The occurrence of “aggressive and avoidant” problematic behaviour was greater for the SAS-AG when compared to the SAS-SG.
- On the CBS there was a relationship between increased total scores on the SAS-A and increased lack of motivation and increased non-compliance.
- On the mood questionnaires, the SAS-AS did not present with higher levels of depression when compared to the SAS-SG.

These results indicate the autonomous group spent more time isolated, in their room, than with other people. They generally tend to avoid social interaction. They tend to spend more time purposefully walking, with avoidant-type interaction and they tend to

display more problematic behaviour in the form of avoidance (not complying to activities of daily-living) and aggression. As the total scores on the SAS-A increase, so does the presence of lack of motivation and non-compliance.

However, the predictions that the autonomous group (SAS-AG) would show a greater loss of interest / apathy (measured by doing nothing or sleeping), was not supported. Furthermore, they did not show higher levels of depression when compared to the sociotropic group.

3.4.4 b: Sociotropic personality mode

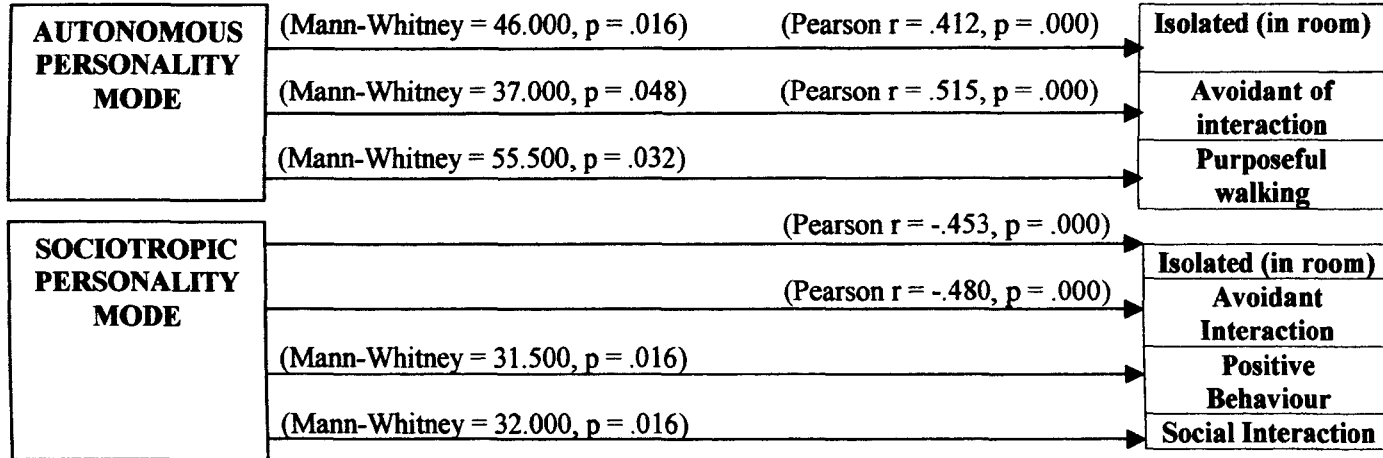
- On the direct observation, the sociotropic group was found to spend more time seeking attention, interacting and displaying anxious behaviour than the autonomous group.
- On the CBS, the sociotropic group was found to spent more time demanding attention than the autonomous group.
- On the mood questionnaires the sociotropic group, was found to show significantly greater levels of anxiety when compared to the autonomous group.

These results show that the sociotropic group spends significantly more time seeking attention, interacting and showing anxious type behaviours than the autonomous group. They also, showed significantly more demanding attention and higher levels of anxiety than the autonomous group (SAS-AG).

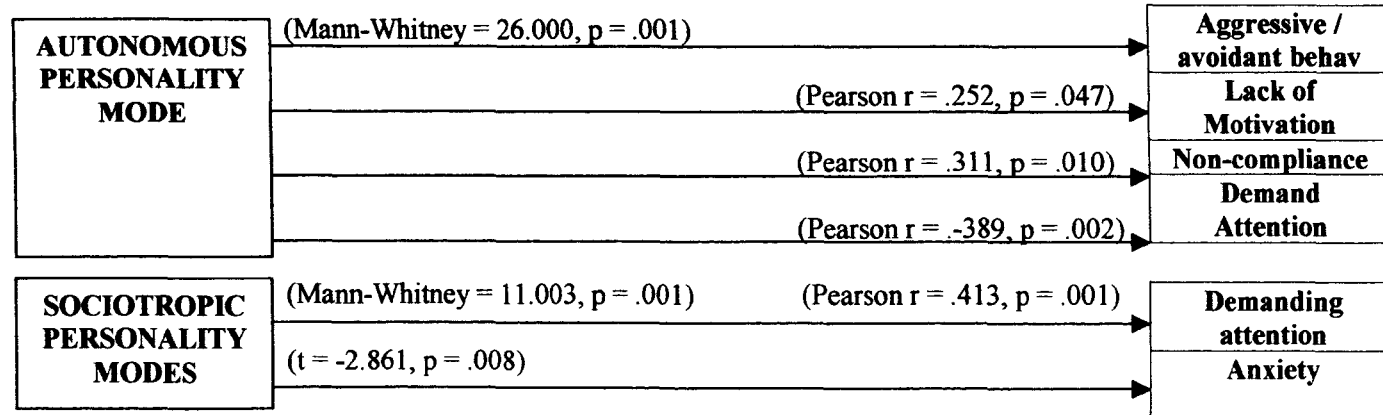
Overall, the results do indicate that there are different presentations of behaviour for both the autonomous and sociotropic groups. The autonomous group spent more time isolated, away from people, avoidant of interaction and showing a greater incidence of aggressive behaviour. They tend to show low motivation and non-compliance. In contrast, the sociotropic group spend more time interacting, demanding attention from others and showing higher incidence of seeking attention and anxious-type behaviours, as well as higher level of anxiety.

Figure 6: STABILITY OF THE PERSONALITY MODES

BEHAVIOUR PRESENTATION



PROBLEMATIC BEHAVIOUR MOOD PROBLEMS



3.5 PSYCHOLOGICAL ADJUSTMENT TO RESIDENTIAL CARE

In this section the third research question will be addressed, with the following hypotheses:

1. The greater the scores on the autonomous scale (SAS -A) and the sociotropic scale (SAS -S) the poorer the adjustment to residential care in terms of mood and behaviour.
2. There will be significantly more problems of adjustment to residential care as demonstrated by mood and behaviour within the sociotropy and autonomy groups when compared to the mixed group.

The prediction was that the greater the total scores on either the SAS-A or the SAS-S the poorer the adjustment to residential care, as evidenced by higher levels of mood and behaviour disturbance (BPSD). In addition, it would be expected that those in the autonomous group (SAS-AG) and sociotropic group (SAS-SG) - (i.e. two or more standard deviations away from the mean) would show great level of mood problems and problematic behaviour compared to those individual who scored less than two standard deviations away from the mean - the mixed group (SAS-MG), and these higher level of mood problems and problematic behaviour would indicate poorer adjustment to residential care. Therefore, the analysis for both mood difference and behavioural difference, will consist of both, an analysis to of the relationship of the total scores on the SAS-A and SAS-S to the mood and behaviour measures using 2-tailed bivariate

correlations and a comparison of the autonomous group (SAS-AG) and sociotropic group (SAS-SG) with the mixed group (SAS-MG).

Section 3.5.1 investigates all participants that were observed (N = 47) in relation to the behaviour on the direct observation. Section 3.5.2 examined all participants (N = 63), in relation to the staff reports of problematic behaviour on the CBS. Section 3.5.3 investigates all participants (N = 63) in relation to the scores on the mood-measures – (BASOLL-mood, Cornell and RAID). In addition, section 3.5.4 investigates the well-being scores from the direct observation, as poor scores on this may be indicative of poorer adjustment.

3.5.1: Are there greater problematic behaviours, as measured by direct observations associated with higher scores on the SAS?

This section investigates firstly the relationship between total problematic behaviour as measured by direct observation, and the scores on both the SAS-A and the SAS-S (section 3.5.1 a) and secondly the significant differences in problematic behaviour between the autonomous and sociotropic groups compared with the mixed group (section 3.5.1.b).

3.5.1 a: The relationship between the total problematic behaviour on the direct observations and the scores on the SAS-A and the SAS-S.

The expectation is that, problematic behaviour will increase as the personality scores as the total scores on the SAS-A and SAS-S increase, observed problematic behaviour will also increase. A Pearson (2-tailed) Bivariate Correlation was used.

It was found that, for the total scores on the SAS-A, there was a weak, positive correlation with the total observed problematic behaviour (Pearson $r = .321$, $p = .028$). In addition, for the total scores on the SAS-S, there was a weak, positive correlation with the total observed problematic behaviours (Pearson $r = .352$, $p = .015$).

3.5.1 b: The significant differences between the SAS-AG and the SAS-SG compared to the SAS-MG, on behaviours found on the direct observations

The prediction that the SAS-AG and SAS-SG will have significantly greater levels of problematic behaviours, when compared to the SAS-MG, was investigated using Mann-Whitney U tests, with effect of the multiple analyses adjusted for by using the Bonferroni Correction. The significant results for SAS-AG versus the SAS-MG comparisons are shown in table 16, below, and the result for the SAS-SG versus SAS-MG comparisons are shown in table 17, below.

Table 17: Mann-Whitney tests comparing the SAS-AG and the SAS-MG on all the direct observations

Activity/ Behaviour	Mann-Whitney	Z	P	Bonferroni Correction
AUTO / MIXED ISOLATION / NO INTERACTION:				
In room	53.00	-3.352	.001	.005
Watching	50.00	-3.165	.002	.010
INTERACTION:				
Avoidant Interaction (-)	45.500	-3.497	.000	.000
Purposeful walking avoidant Interaction	70.00	-3.467	.001	.005
TOTAL PROBLEMATIC BEHAVIOUR				
Total amount of time	68.500	-2.758	.006	.030

Table 18: Mann-Whitney tests comparing the SAS-SG and the SAS-MG on all the direct observations

Activity/ Behaviour	Mann-Whitney	Z	P	Bonferroni Correction
SOCIO / MIXED ISOLATION / NO INTERACTION:				
In room	121.500	-.399	.690	
Watching	57.500	-2.678	.006	.030
INTERACTION:				
Total Interaction (-)	84.00	-1.840	.066	
Purposeful walking (-) Interaction	110.00	-1.781	.075	
TOTAL PROBLEMATIC BEHAVIOUR				
Total amount of time	65.00	-2.628	.009	.045

As can be seen from table 17, the autonomous group (SAS-AG) and the mixed group (SAS-MG) show significant differences on five different behaviours. Examination of the group means for these behavioural categories (see table 9) shows that the autonomous group scores higher on the following behaviours: In their room (isolation), avoidant social interaction, purposeful walking with negative interaction and problematic behaviour. These were all related to BPSD and not social adjustment. As can be seen from table 18, four of the behaviours are significantly different between the sociotropic group (SAS-SG) and mixed group (SAS-MG). Examination of the group means (see table 9) suggest a higher score for problematic behaviour was only seen with the SAS-SG.

Within this research adjustment is measured in terms of mood and behaviour. This section is investigating behaviour using direct observation. There was evidence of weak, positive correlation between increased scores on the SAS-A and the SAS-S and over all problematic behaviour as measured by the direct observation. In addition, both groups showed more overall problematic behaviour, when compared to the mixed group. These results indicate that the autonomous and sociotropic groups show poorer adjustment as the scores in the SAS-A and SAS-S increase, and when compared to the mixed group. These results also showed that the autonomous group showed more significantly different behaviours when compared to the mixed group (i.e. more time in their room, avoidant interaction, purposeful walking).

3.5.2: Are there greater problematic behaviours, as measured by the CBS, associated with higher scores on the SAS?

This section investigates firstly the relationship between total challenge scores on the behaviour measure (CBS) and the scores on both the SAS-A and the SAS-S (section 3.5.2 a) and secondly the significant differences in problematic behaviour noted on the CBS between the SAS-AG and SAS-SG compared with the SAS-MG (section 3.5.2 b).

3.5.2 a: The relationship between the total incidence scores on the CBS and the scores on the SAS-A and the SAS-S.

The expectation is that problematic behaviour will increase as the personality scores increase (because problematic behaviours is taken as an indicator of poorer adjustment to residential care). A Pearson (2-tailed) Bivariate Correlation was used.

The results from the correlations show that the total scores on the SAS-A do not significantly correlate with the total challenge scores on the CBS (Pearson $r = .144$, $p = .375$) and this is also true for the total scores on the SAS-S and the total incidence scores (Pearson $r = -.040$, $p = .747$).

3.5.2 b: The significant differences between the SAS-AG and SAS-SG compared to the SAS-MG, on behaviours on the CBS.

The expectation is that the autonomous and sociotropic groups will have significantly greater levels of problematic behaviours when compared to the mixed group. This was investigated using Mann-Whitney U tests and the effect of the multiple analyses was adjusted for by using the Bonferroni Correction. The significant results are shown in table 19, below.

Table 19: The significant results of the Mann-Whitney U tests, comparing the SAS-AG and SAS-SG with the SAS-MG on behaviours on the CBS

BEHAVIOUR ON THE CBS	Mann-Whitney U	Z	P.	Bonferroni Correction
AUTONOMOUS AND MIXED GROUP:				
Physical Aggression	134.000	-3.792	.000	.000
Verbal Aggression	86.000	-4.535	.000	.000
Non-Compliance	127.000	-3.609	.000	.000
Lack of Motivation	99.500	-3.507	.001	.008
Suspiciousness	13.500	-3.776	.001	.008
Screaming / cry out	153.000	-3.352	.001	.008
Demand Attention	190.00	-3.054	.002	.016
SOCIOTROPIC AND MIXED GROUP:				
Physical Aggression	119.500	-3.841	.000	.000
Verbal Aggression	122.500	-3.460	.001	.008
Non-Compliance	107.500	-3.799	.000	.000
Suspiciousness	152.000	-3.054	.002	.016
Screaming / cry out	115.000	-3.996	.001	.008
Demand Attention	10.000	-3.503	.001	.008

As table 19 show, physical and verbal aggression, non-compliance, lack of motivation, suspiciousness, screaming / crying out and demanding attention are significantly different when the autonomous group (SAS-AG) is compared to the mixed group (SAS-MG). On examination of the group means (see table 10) it is evident that that the SAS-AG display significantly more of all the behaviours listed above, than the SAS-MG. When the sociotropic group (SAS-SG) was compared to the SAS-MG, it was found that all behaviours listed above were significant except lack of motivation. Again, on

examination of the group means SAS-SG appears to present with more of all the significant behaviours, than the SAS-MG.

Within this research psychological adjustment is measured in terms of mood and behaviour. This section investigates behaviour using the CBS. There was no significant relationship found between increased scores on the SAS-A and SAS-S and the total incidence scores. However, when the group differences were examined, it was evident that the SAS-AG and SAS-SG showed significantly more problematic behaviours than the SAS-MG. These results suggest that the autonomous and sociotropic groups show poorer psychological adjustment than the mixed group.

3.5.3: Are there greater mood problems associated with higher scores on the SAS?

This section investigates firstly, the relationship between the scores on the three mood measures (BASOLL-mood, Cornell and RAID) and the scores on the SAS-A and the SAS-S (section 3.5.3 a) and secondly, the differences between the autonomous group (SAS-AG) and sociotropic group (SAS-SG) as compared with the mixed group (SAS-MG).

3.5.3 a: The relationship between the three mood-measures and the scores on the SAS-A and the SAS-S.

The prediction that as the total scores on the SAS-A and SAS-S increase, the total scores on the each of the mood measures will increase was examined using a Pearson's

(2-tailed) Bivariate Correlation. The effect of multiple correlations above was adjusted for by using the Bonferroni Correction.

The results indicate that there are significant, positive correlations between the total scores on the SAS-A and the BASOLL-mood (Pearson $r = .554$, $p = .000$), the Cornell (Pearson $r = .692$, $p = .000$), and the RAID (Pearson $r = .687$, $p = .000$). There are also significant, positive correlations between the total scores on the SAS-S and the BASOLL-mood (Pearson $r = .643$, $p = .000$), the Cornell (Pearson $r = .692$, $p = .000$) and the RAID (Pearson $r = .643$, $p = .000$). Thus, as the total scores increase on the SAS-A and the SAS-S, the total score of mood problems, depression and anxiety also increase.

3.5.3 b: The significant differences between the SAS-AG and SAS-SG compared to the SAS-MG on mood problems.

The expectation is there will be significantly greater mood problems for the autonomous and sociotropic groups compared to the mixed group. This was investigated using Mann-Whitney U tests and the effect of the multiple analyses was adjusted for by using the Bonferroni Correction. The results are shown in table 20, below.

Table 20: A Mann-Whitney test comparing SAS-AG and SAS-SG with the SAS-MG on all three mood-questionnaires

Mood Questionnaires	Mann-Whitney	Z	P	Bonferroni Correction
BASOLL				
SAS-AG – SAS-MG	15.00	-5.188	.000	.000
SAS-SG – SAS-MG	10.00	-5.144	.000	.000
CORNELL				
SAS-AG – SAS-MG	22.50	-4.984	.000	.000
SAS-SG – SAS-MG	1.00	-5.304	.000	.000
RAID				
SAS-AG – SAS-MG	49.50	-4.392	.000	.000
SAS-SG – SAS-MG	13.00	-5.020	.000	.000

As table 21 shows, both the autonomous and sociotropic group score significantly higher on the three measures pertaining to overall mood (BASOLL), depression (Cornell) and anxiety (RAID) and this therefore indicates that the autonomous and sociotropic group show significantly more mood problems when compared to the mixed group.

Within this research, psychological adjustment is measured in terms of mood and behaviour. This section investigated mood and the results show that firstly, as the SAS-A and SAS-S total scores increase so do levels of mood problems, and secondly, the autonomous and sociotropic groups have significantly higher level of mood than the mixed group. These results indicate difficult psychological adjustment.

3.5.4: Will people with higher autonomous / sociotropic scores, have decreased levels of well-being?

This section investigates firstly, the relationship between well-being scores and the scores on the SAS-A and SAS-S (section 3.5.4 a) and secondly, the differences between the autonomous group (SAS-AG) and sociotropic group (SAS-SG) as compared with the mixed group (SAS-MG) – (section 3.5.4 b).

3.5.4 a: The relation between the well-being scores and the scores on the SAS-A and the SAS-S

The prediction that as the total scores on the SAS-A and SAS-S increase, the lower the level of well-being scores, was examined using a 2-tailed Spearman's Rho Correlation (due to the categorical nature of the data).

The results of the correlation shows that there was no significant relationship found between the scores on the autonomous question and well-being (Spearman's Rho = -.193, $p = .194$) and no significant relationship between the scores on the sociotropic questions and well-being (Spearman's Rho = .129, $p = .387$).

3.5.4 b: The significant differences between the SAS-AG and the SAS-SG compared to the SAS-MG on well-being scores

The expectation is that there will be lower levels of well-being (and therefore high levels of ill-being) for the SAS-AG and the SAS-SG. This was investigated using a Chi-

squared analysis. Table 21 below, shows the frequency of the number of people within each of the three groups and the well-being / ill-being scores they scores (see methodology, section 2.4.6 b). Table 22 shows the whether the three groups are showing significantly more well-being / ill-being.

Table 21: The frequencies of the participants that had an overall ill-being or well-being score

	SAS-AG	SAS-SG	SAS-MG	Total
Ill-being	9 (64%)	10 (77%)	7 (35%)	28
Well-being	5 (36 %)	3 (23%)	13 (65%)	19
Total	14	13	20	47

Table 22: A Chi-squared analysis showing whether the difference between the ill-being and well-being scores are significant for any of the three groups

	Chi-squared	df	P
SAS-AG	1.971	1	.167
SAS-SG	3.769	1	.053
SAS-MG	1.800	1	.180

The results above indicate that there is no significant relationship between the scores on either the autonomous or sociotropic questions and the ill-being scores and there are not a significantly greater number of people within the ill-being category compared to the well-being category, in any of the three groups.

3.5.5: Summary of the results from research question three:

The prediction was that the greater the total scores on either the SAS-A or the SAS-S the poorer the psychological adjustment to residential care, and this would be indicative in higher levels of mood and behaviour. In addition, it was predicted that those in the autonomous group (SAS-AG) and sociotropic group (SAS-SG) would show greater levels of mood problems and problematic behaviour compared to those individual in the mixed group (SAS-MG), and this would indicate poorer psychological adjustment to residential care (see figure 7). The following section reviews the results:

- In relation to the direct observation: There was evidence of weak, positive correlation between increased scores on the SAS-A and the SAS-S and overall problematic behaviours. In addition, both the SAS-AG and SAS-SG showed more overall problematic behaviour, when compared to the SAS-MG. These results indicate that the autonomous and sociotropic groups show poorer psychological adjustment in terms of problematic behaviours.
- In relation to the CBS: There was no significant relationship found between increased scores on the SAS-A and SAS-S and the total challenge scores. However, when the significant differences were investigated, it was evident that the SAS-AG and SAS-SG showed significantly more problematic behaviours than the SAS-MG, such as aggression, non-compliance, demanding attention and screaming / crying out. These results indicate that the autonomous and sociotropic groups show poorer psychological adjustment than the mixed group, in terms of problematic behaviour.

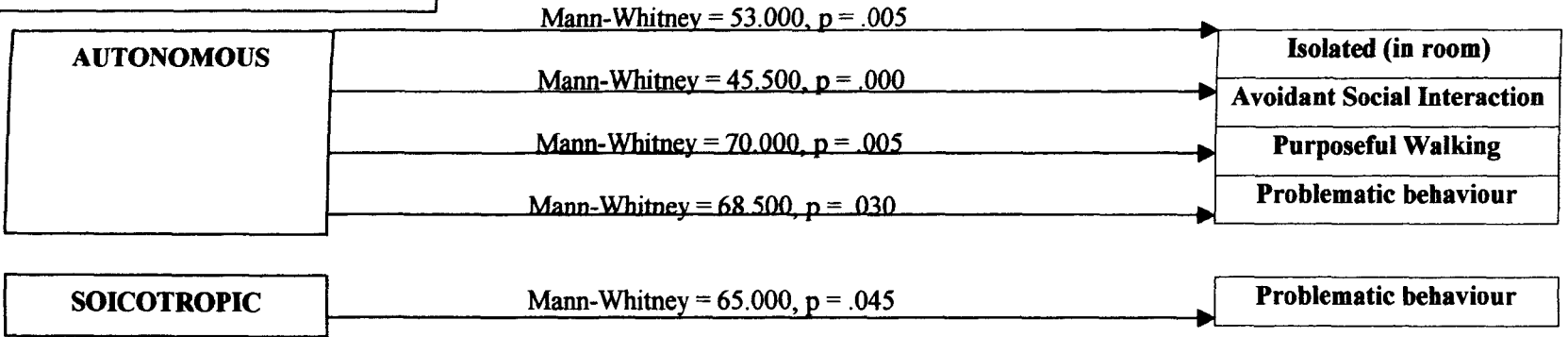
- In relation to the mood-measures: the results show that firstly, as the SAS-A and SAS-S total scores increase so do levels of mood problems, and secondly, the autonomous and sociotropic groups have significantly higher level of mood than the mixed group. These results suggest that the autonomous and sociotropic groups show poorer psychological adjustment in terms of mood.
- In relation to well-being: There was no relationship found between ill-being and the two personality modes and no significant difference between ill-being and well-being with the three groups.

Overall, these results show that the SAS-AG and SAS-SG show higher level of mood problems and problematic behaviour, both as the total SAS-A and SAS-S increase, and when compared to the SAS-MG. This indicates that the autonomous and sociotropic groups show poorer psychological adjustment, in terms of problematic behaviour and mood problems.

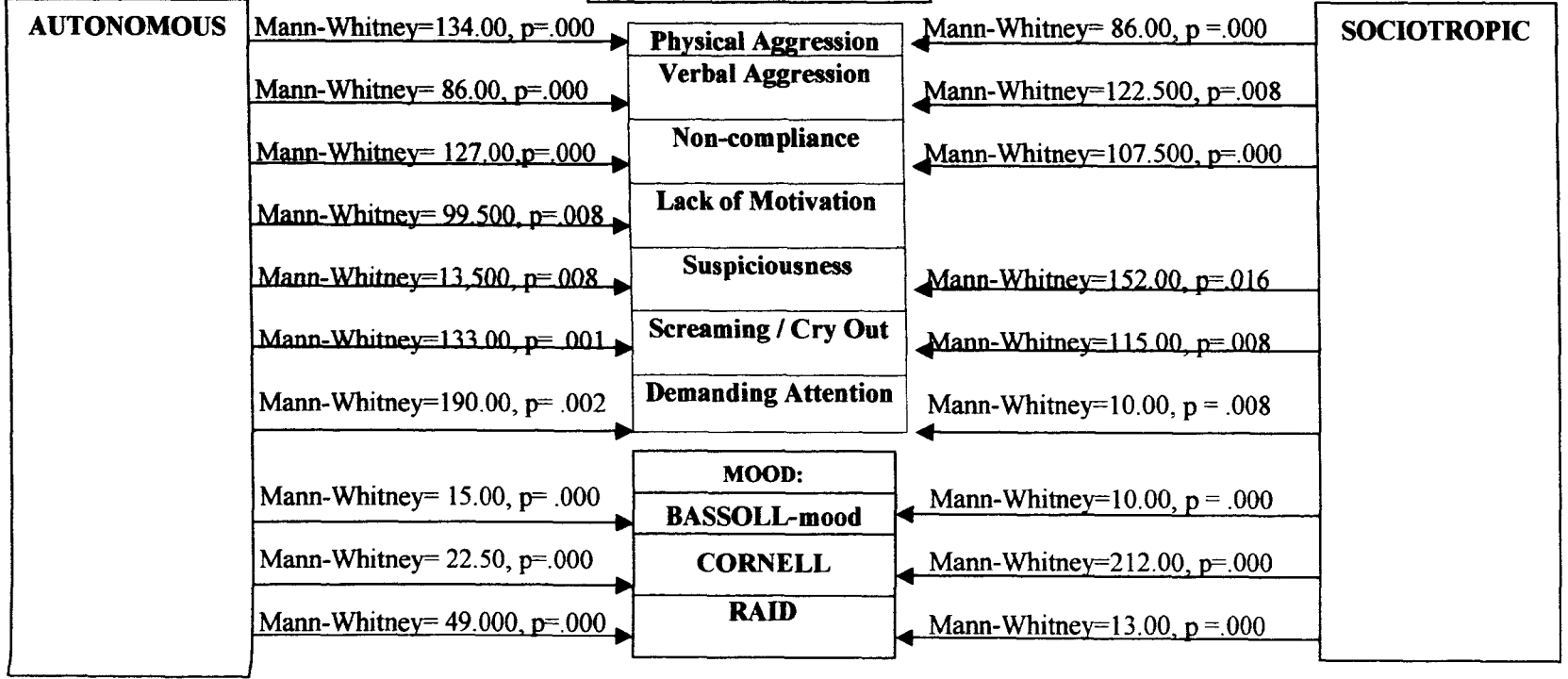
However, it would have been expected that there would have been difference in the well-being and ill-being scores, within the autonomous and sociotropic groups and this was not found.

Figure 7: PSYCHOLOGICAL ADJUSTMENT TO RESIDENTIAL CARE

DIRECT OBSERVATION



CBS



3.6 OVERALL SUMMARY OF RESULTS

The research questions within this study were as follows: Does the older adult (dementia) populations reflect the dimensional aspects of the SAS? Will the personality modes remain stable over time, irrespective of dementia? Does personality influence psychological adjustment to residential care in older people with dementia?

In relation to the first research question, the results showed that the population was normally distributed, in that the majority of the participants fell, as predicted, less than 2 standard deviations away from the mean and fewer participants achieved scores of 2 or more standard deviations away from the mean. The confidence intervals included the expected mean (1500) and therefore this indicates that the scores for both populations could be generalised as the original clinical sample. Finally, the total scores of both populations allowed for differentiation between three groups of “personality mode” i.e. the autonomous group (SAS-AG) the sociotropic group (SAS-SG) and the mixed group (SAS-MG).

In relation to the second research question, the stability of the modes was established by looking at what behaviour and mood presentations would be expected from individuals’ with extreme personality modes and what behaviour and mood presentations were observed. The ‘gold standard’ direct observation comparison found that the autonomous group (SAS-AG) tended to spend more time isolated, in their room (Mann-Whitney = 46.000, $p = .016$), they were generally avoidant of interaction (Mann-Whitney = 37.000, $p = .048$) and spent more time purposefully walking about but with avoidant type social interaction (Mann-Whitney = 55.500, $p = .032$), as compared with the sociotropic

group. Furthermore this group also showed more aggressive types of behaviours on both the direct observation scale and informant (staff) interview (i.e. the CBS). Weaker, but significant, relationships were found on the CBS scale between the autonomous group and non-compliance (Pearson $r = .311$, $p = .000$) and lack of motivation (Pearson $r = .252$, $p = .047$).

In contrast, there was a negative relationship between the sociotropic group and time spent isolated (i.e. in their room) (Pearson $r = -.453$, $p = .000$). Further, where interaction took place, the sociotropic group showed more positive interaction as compared to the autonomous group (Mann-Whitney = 31.500, $p = .016$). The sociotropic group also showed greater levels of anxiety on an informant-interview (t-test = -763, $p = .008$) and more attention seeking behaviour on direct observation (Mann-Whitney = 30.000, $p = .004$) and on informant interview (Mann-Whitney = 11.003, $p = .001$), when compared to the autonomous group. Therefore, many of the prediction made were confirmed in that aspects of temperament are stable irrespective of dementia and distinct temperamental difference present in different ways.

In relation to the third research question, psychological adjustment was investigated by exploring the presences of problematic behaviours and mood problems (BPSD) in relation to the personality modes. In terms of behaviour, the results from the 'gold-standard' direct observations found a greater level of problematic behaviour associated with the autonomous and sociotropic groups, when compared to the mixed group (Mann-Whitney = 68.500, $p = .030$; Mann-Whitney = 65.000, $p = .045$, respectively). Furthermore, the results from the CBS found that the autonomous and sociotropic groups showed higher levels of a number of problematic behaviours, when compared to

the mixed group (see table 23). In addition, the results the result from all informant (staff) mood-measures (BASOLL-mood, Cornell and RAID) showed that there was high level of mood problems, depression and anxiety associated with the SAS-AG and the SAS-SG (see section 3.5.3 a). Finally, when the autonomous and sociotropic, when compared to the mixed group, showed significantly higher levels on all the mood measures (see table 24). The results indicate that those with autonomous and sociotropic-type personality modes, showed poorer psychological adjustment in terms of the increased presence of problematic behaviours and mood problems.

CHAPTER FOUR

DISCUSSION

The primary purpose of this research was to examine whether personality influences adjustment to residential care in older adults with dementia. It is argued that personality theory based on the five-factor trait model may not be a useful way to examine personality in dementia. This is because neurological deterioration in dementia affects the majority of the neo-cortex which itself (particularly the frontal lobes) is believed to be the anatomical structure that is associated with many of the personality traits (Lishman, 1998; Lezak, 1995; Damasio et al, 1994). It was argued that the concept of personality modes (Beck, 1989) with the theoretical underpinning in emotions and temperament (Murphey, 1938; Solms & Turnbull, 2001), was perhaps more useful than the original trait / type theories (see Digman, 1990), in understanding and measuring personality in dementia. Beck (1989) investigated aspects of personality that were present from birth until death and were derived from emotion and temperament and described these as personality modes i.e. autonomy and sociotropy and it was these constructs that were used in the present study. This is because temperament and emotion are thought to be associated with older brain structures rather than the neo-cortex (Lishman, 1998; Lezak, 1995; Finch & Graziano 2001). It was therefore reasonable to suggest that temperament may be less susceptible to neurological damage that is associated with dementia and neo-cortical damage.

Measuring personality in dementia with tools based on the five-factor trait theory, such as the NEO-PI may not be enough to properly understand personality in people with dementia. Indeed, as noted in the literature, empirical studies using the NEO-PI with

people with dementia confirm that these traits are not stable and are susceptible to change due dementia (Siegler et al, 1994; Chatterjee et al, 1992; Brandt et al, 1998). In order to test his theoretical formulation, Beck et al (1983) constructed scales to specifically to assess the characteristics of the two personality modes (sociotropy and autonomy), which he developed with a clinical younger adult depressed population. This measure (the Sociotropy-Autonomy Scale - SAS) has been used with an older adult clinical depressed population (Mazure et al, 2002). The present study examined whether the SAS can be used as a relative-informant measure of personality mode with people with dementia. The study also examined whether personality modes remained stable irrespective of dementia and if so, whether personality mode / temperament contributes to poor adjustment of people with dementia living in residential care. Each of these three will be critically evaluated next.

This study suggests that there is some face validity in using informant interview for people with dementia living in residential care since the patterns on the SAS were normally distributed (see result section 3.2 (ii)) with the mean within the expected confidence intervals for this population. The results are consistent with Beck's theoretical position (Beck et al, 1983), which predicted that there would be fewer people who scored at the more extreme ends of the dimension (defined in this study by two or more standard deviations away from the mean) on either the autonomous or sociotropic scales. The results are also consistent with the empirical findings of Hammen et al (1989) who used a sample of 47 young depressed adults. They noted that the majority scores reflected a combination of the two personality modes and fewer people showed extreme scores on either the autonomous or sociotropic scales, and these people were associated with higher levels of depression. The SAS (informant-interview) does appear

to discriminate the dimensional aspects of personality modes in older people with dementia. Relative-informant interview was used because it was thought that the present sample, who had been living in residential care between six months and five years would reflect a moderate to severe group of people with dementia with poor verbal capacity. Studies that have used informant-interview in relation to personality, has been found to be either reliable (Seigler et al., 1994) or not reliable (Brandt et al., 1998) and therefore there is no general consensus about the reliability of informant-interview. However, the majority of the research that has been cited within this study, pertaining to investigating personality and dementia, has used informant-interview (Siegler et al., 1994; Chatterjee et al, 1992; Brandt et al., 1998; Low Brodaty & Draper, 2002; Magai et al, 1997). The results of this study, which noted that informant-interview was reliable as compared with direct observation of resident behaviour *in situ*, suggests that at least when relative informants are not living with the person with dementia, they may be able to reliably report on the temperament of their relative. One potential limitation of this study was that the SAS could have been carried out with the 63 participants themselves. There has been a study that has investigated the ability of people with dementia to answer questions themselves. Mozley et al., (1999) interviewed 308 elderly residents with dementia, completing a number of questionnaires pertaining to quality of life, within 2 weeks of admission to residential care. It was concluded that a high proportion of elderly people were able to answer questions about their quality of life, even in the presence of significant cognitive deficits. This therefore implies that the older person with dementia can give information, rather than having to rely on informant interview, where the reliability is questioned. Nevertheless, the participants within this study had moderate to severe dementia and, in the majority of cases, there was a lack of verbal ability. Some authors suggest that the impoverished emotional and social environment

of current-day residential care result in excess disability that is not due to the neurological damage (see Maniz-Cook, 2001). A shortened version of the SAS has been used in a younger sample of depressed people and future research could use this 17 item shortened measure with people with dementia living in care, perhaps prior to or just or just after entry to care, to develop person specific disability intervention.

Next the findings on the stability of personality in dementia will be examined. The results using the SAS (informant-interview) with an older adult (dementia) population can be evaluated to firstly consider whether there is support for Beck's theoretical position that personality modes are consistent over time (i.e. irrespective of environmental circumstances). Secondly, they can be used to evaluate the argument presented in this thesis i.e. that personality modes are stable and not affected by the neurological damage that is associated with dementia.

Beck's theoretical position argues that people show specific types of behaviours associated with the autonomous and sociotropic personality modes. Those with autonomous-type personality modes value power and want control over their environment; they do not put value on interpersonal relationships, relying mainly on themselves were ever possible (Beck, 1983). They would be expected to display independent behaviours, looking for a purpose or something to do; they would want to control their environment, and would tend to avoid interaction with others, preferring to spend time alone (Beck, 1987). In contrast, those with sociotropic-type personality modes value relationships and meaningful interpersonal interaction (Beck, 1983). They would therefore be expected to spend more time seeking meaningful interaction with others.

The results showed that those with autonomous-type personality modes spent increasingly more time away from people. If they were not in their room, they spent more time “purposefully walking” and they showed less interest in interacting, when compared to the sociotropic group. In contrast, the sociotropic group spent less time in their rooms, preferring to be in the communal areas. They showed more positive interaction for social reasons and less time avoidant of interaction, when compared to the autonomous group.

One initially surprising result that was not necessarily predicted by Beck’s theoretical position was the observation that those with the autonomous personality modes, in the older adult (dementia) population showed “purposeful walking”. Beck’s position would suggest that they might in fact be withdrawn and depressed to the point that they show little activity or purpose. However, this must be considered in the context of residential care where there is little opportunity to assert oneself and many residents spend most of their day ‘busy doing nothing’ (Nolan, Grant & Nolan, 1995). It may be that the high need for independence in autonomous individuals resulted in attempts to overcome the inertia of care environments through ‘walking with purpose’ to activity, i.e. “purposeful walking”. It is fair to note that these individuals did not value social interaction and in fact they were significantly more avoidant in situations where they came into social contact with others.

However, the results do lend support to Beck position that behaviours will be mode-specific and the different from one another. Consequently these behaviour will evident

with people with autonomous and sociotropic personality modes and because they are present in older adult (dementia) population, this suggests that the modes are consistent.

In addition, Beck's (1983) theoretical position, would lead to the prediction that there would be different problematic behaviours and mood problems associated with each personality mode and these would occur when the individual is in an environment that threatens the attributes they value. Thus previously noted those with autonomous-type personality modes would value power, control and self-reliance, whereas those with sociotropic personality modes value meaningful personal interaction. Beck (1983) states that where one mode predominates, there is a heightened sensitivity to threats of these valued attributes and in response to threat, different personality mode-dependent problematic behaviour and mood presentations will be seen. According to Beck (1983) people with autonomous personality modes would show more frustrated and aggressive behaviours, withdrawal from the environment, high avoidance of social interaction and a profound lack of interest in response to threat. The reason for this is that they may, in face of a threat, have thoughts around failure and feelings of incompetence and, where the threats are seen as irreversible, this would precipitate a withdrawn depression (Beck, 1987). For those with sociotropic-type personality modes, Beck (1983) predicted that behaviour would take the form of anxiety-seeking / demanding attention and thought would be around loss and self-denigration. He states that threat to intimacy precipitate restless type depression (known as agitated depression) and anxiety.

Beck's theoretical position was developed with a younger adult population and has been supported largely with empirical studies using similar populations. For example Robins and Luten (1991) found that evidence of loss of interest or pleasure, feeling like a

failure, self-blame, avoidance of people and irritability associated with autonomous personality mode; and a need for interaction, reassurance, clinging / crying and restless walking about associated with sociotropic personality modes, in a outpatient, depression, adult population. Mak (2001) and Sun et al., (1999) found a relationship with high levels of anxiety and the sociotropic personality mode, both using a student population. Only one study with older adults (Mazure et al., 2002) utilised the concept of personality modes in the prediction of behaviour and mood, but this study did not include people with dementia. The present study is the first study to the author's knowledge to investigate the stability of personality, on the basis of a particular theoretical position about temperament (i.e. personality modes) with an older adult population with dementia, with the argument that personality modes are not affected by neurological deterioration in dementia and therefore will remain stable. Stability was investigated by examining the prediction that if the modes are, in fact, stable over time, then similar problematic behaviour and mood presentation should be seen within the older adult population, because residential care has been argued to present threats to both those with autonomous and sociotropic personality modes (Agich, 1993).

The present study lends support to this prediction: the autonomous group showed significantly more aggressive type behaviour; spent more time isolated (in their room) and showed more negative (and avoidant) social interaction. In particular they did not show demanding or attention-seeking behaviour and in fact avoided social interaction where possible, when compared to the sociotropic group. There was also some evidence of lack of motivation, non-compliance and purposeful walking with negative avoidant-type interaction. For the sociotropic group the findings were also consistent with Beck's position since these participants spent less time in their room, more time surrounded by

people and more time demanding attention. They showed anxious-type behaviours and actively sought staff attention.

A departure from Beck's theoretical position (Beck, 1983) in this study was that there were no highly obvious differences between personality modes on apathy or lack of interest, particularly during the direct observation. Beck would predict a profound loss of interest associated with the autonomous personality modes (Beck, 1987), but not the sociotropic modes. This may be because lack of interest was measured by the amount of time people spent sleeping during the day or doing nothing and also lack of motivation on the CBS staff report scale. However, lack of motivation of all residents with or without dementia is the most challenging problem that staff have to overcome in care homes (Moniz-Cook, 2001). Furthermore, as noted earlier people with dementia who live in care homes spend most of their day doing nothing or sleeping (Agich, 1993), so ceiling effects may have masked the group differentiation of personality mode and behaviour on these variables. Despite the impoverished social environments that may have contributed to some of these ceiling effects there was nonetheless some weak support for the prediction that autonomous modes would show more loss of interest and motivation: on the CBS there was a weak but significant correlation between lack of motivation and autonomous people but not with the other groups. Another behaviour that was predicted, but not observed *in situ* or on the CBS for people with sociotropic personality modes, was clinging-type behaviour. This may be because the direct observation of clinging behaviour (when it was accompanied by anxious facial expressions and body language) was incorporated in the anxious-type behaviour category. Also the relatively small number of sociotropic people (i.e. 13 participants) who were measured on one item for clinging behaviour on the CBS, against an

equivalent sample size of autonomous participants, may have been too small to detect between group differences.

In terms of mood, Beck's theory would predict that the autonomous group would show more withdrawn depression than the sociotropic group (Ouimette et al., 1994). However with the measure of depression in this study, there was no difference in the overall levels between the autonomous group and the sociotropic group. This may be due to the concepts behind the type of measure that is validated to evaluate depression in dementia patients (i.e. the Cornell Scale). This scale is weighed towards agitated depression (which according to Beck's theory may in fact be seen in sociotropic personality modes) whilst being somewhat less strong on measuring withdrawn depression (which Beck would associate with autonomous personality modes). Indeed the measure does not differentiate depression sub-types and tends to concentrate on more anxious/restless type depression, since this is how, according to clinical views depression presents in most people with dementia. A further perhaps less bio-medically dominated exploration of depression in this population would have assisted interpretation on the relationship between personality mode and mood in dementia. Empirical support for Beck's (1987) prediction that those with more sociotropic-type personality would present with higher levels of anxiety, when they were in an environment which threatened the attributes they valued, was shown by Mak, (2001) and Sun et al., (1999) with younger non-clinical student samples. The present study lends support to this position, with a clinical sample of older people with dementia living in care homes. Here the sociotropic group were significantly more anxious than the autonomous group.

Overall, comparison of the direct observations of people with dementia at the extreme ends of the dimension of personality modes supported much of what was predicted by Beck's theory that behaviours will be mode-specific and modes are different from each other. Where there are inconsistencies these are seen as related to the effects of the social environment within the residential setting or to specific aspects of the behaviour measurement. The 'gold-standard' of direct behaviour observation is perhaps more useful in understanding behaviour and affect in people with dementia, than is the usual clinical interview that is used with younger and older non-dementia populations. In addition, the findings of this study indicate that those in the older adult (dementia) population with autonomous or sociotropic personality modes show similar problematic behaviour and mood problems (when in a threatening environment) to a younger population, (who have not adjusted well to life events) and therefore offers support for the stability of the personality modes, irrespective of dementia.

The present findings therefore support the view that personality as understood within emotion and temperament, is stable irrespective of dementia because they are a function of older brain structures (Lezak, 1995; Finch & Grazino, 2001). The largely bio-medical view which associated personality primarily with the neo-cortex and therefore argues that personality is disturbed as a result of dementia (Kolanowski & Whall, 1996; Swearer, 1994; Petry et al, 1988; Sungal & Crockett, 1993), has been challenged by these findings. The effect of personality on the adjustment to residential care, for those with dementia, will be discussed next.

The research to date on the effect of personality on adjustment to residential care has been inconclusive, with some studies indicating that personality does effect adjustment

(Hagberg, Hagberg & Saveman, 2002; Magai et al., 1997) and other arguing personality does not effect adjustment (Brandt et al., 1998; Low Brodaty & Draper, 2002). The present research has argued that one reason for these inconclusive results may relate to the basis of personality theory that underpins the measures used in various studies. Some studies have relied on the five-factor trait theory (Brandt et al., 1998; Low Brodaty & Draper, 2002) and the NEO-PI has been a common dependent variable. Other studies have relied on affect (Magai et al., 1997; Solms & Turnbull, 2002) which it is argued here is more associated with temperament, emotion and more basic concepts of personality and motivation. This latter theoretical approach lends itself to the view that personality (based in temperament and emotions) is relatively stable over the life span. Given that it may be associated with older brain structures including the limbic system, it is argued here that this aspect of personality may be less susceptible to brain damage associated with dementia. In the previous section the finding offered some support for this.

The role of personality, in terms of temperament / emotions, in adjustment to residential care following dementia, will be examined next. Dependent variables for adjustment are mood and expressions of 'distress' in the form of problematic behaviour or behaviours that others find challenging.

It has been suggested that when incongruence arises between an individual and the environment (i.e. when the environment poses a threat to the self or the sense of self, those with autonomous and sociotropic personality modes) the 'threatening' environment may be made (Kahana, Kahana & Riley, 1989). Although, the adjustment capacity of people suffering from dementia is likely to be diminished (Lawton, 1980), it

is suggested here that those with sociotropic and autonomous personality modes will show poor adjustment communicated through problematic behaviour and mood problems (Kitwood, 1990, 1997; Stokes, 1995; Davenhill, 1998). There is some empirical support for the view that poor adjustment to residential care can be measured by the presence of problematic behaviours and mood problems (Timko & Moos, 1989; Johnson et al, 1998; Cicirelli, 1987). The previous section of this discussion has added to the body of research on adjustment to residential care by concluding that those with autonomous and sociotropic personality modes show a range of problematic behaviour and mood problems that are distinct to their personality modes and predicted by Beck's theoretical position of the relation between personality mode, behaviour and affect. The effect of personality was also further investigated by, not only be looking at the differences in presentation of behaviour and mood, but also by exploring the levels of problematic behaviour and mood. It was predicted that when individual's at the extremes of the dimensions are in 'new' and potentially threatening environments, that the attributes most valued by the particular motivation (determined by temperament / personality mode) would result in maladjustment communicated through the presence of problematic behaviours and mood problems (Beck, 1983). Empirical evidence for this has been developed for younger population (Robins & Luten, 1991; Ouimette et al., 1994, Robins, Block & Peselow, 1989; Mak, 2001), with one older age study reported (Mazure, et al., 2002), but there is not reason why older adult (dementia) populations would not have the same presentation because residential care, as argued, does threaten the attributes most valued by the those with autonomous and sociotropic personality modes. In addition, Hammen et al (1989) found, with a younger population, that those with a combination of the two personality modes, did not value specific attributes highly and therefore replication and extension of these findings with respect to

maladjustment of older adult (dementia) population in residential care seems reasonable i.e. that this group would show less problematic mood and behaviour problems.

The result showed that there was higher level of observed problematic behaviour and higher levels of overall mood problems, depression and anxiety associated with more extreme scores on the autonomous and sociotropic scale. In addition, the autonomous and sociotropic group showed higher levels of problematic behaviours and higher levels of overall mood problems, anxiety and depression, when they were compared to those in the mixed group (i.e. those with a combination of facets from autonomous and sociotropic personality modes). However, a relationship between the problematic behaviour, as measured by the CBS, and increased scores on the autonomous and sociotropic scales, (Beck et al., 1983) was not found. This could be due to the fact that as shown above, the two personality modes show different presentation of behaviour. The CBS is a measure that investigates challenging behaviour (see methodology, section 2.4 (vii)) and therefore is more sensitive to a greater number of different types of behaviour, than the direct observation. If there are higher rates for some behaviours and not other for say the autonomous personality modes (i.e. high rates of aggression and low rates of demanding attention), then this could affect the overall score on the CBS and ultimately, it's relationship to the autonomous and sociotropic scales. In addition, there was no difference found between ill-being / well-being and the three groups (autonomous, sociotropic and mixed). This could be because the observer was not trained to use DCM (the observational technique that the well-being score was developed for) and therefore may not have been familiar with the protocol for recording the well-being / ill-being score.

Nevertheless the findings lend support to the view that personality modes affect adjustment to residential care, for those with dementia. This was not only supported by the different presentation of problematic behaviours and mood problems, but also in the increased levels of mood and behaviour associated with the two personality modes, in response to a threatening environment. In addition, it was evident that those with a combination of the personality modes, show less adjustment difficulties (in terms of mood and behaviour) when compared to the autonomous and sociotropic groups. Understanding the person-environment fit on the basis of personality modes (sociotropic / autonomous) including the importance of assisting the individual to build meaningful relationships which will reduce the threat associated with interpersonal relationships (O'Conner & Vallerand, 1994) is an area of future clinical psychosocial intervention research.

In summary, this research has investigated the construct of autonomy and sociotropy developed by Beck (1983), to discover whether the implication that these personality modes remain consistent over time can be applied even in the presence of dementia. It was found that the modes do remain stable, irrespective of dementia. This advocates the suggestion that personality does play a role for the people with dementia, because it challenges the assertion that personality does not remain stable, and in fact is disturbed by dementia (Kolanowski & Whall, 1996; Swearer, 1994; Petry et al, 1988; Sungal & Crockett, 1993). This research shows that the dementing process does not disturb at least some aspects of personality. The second aim of this research was to investigate the role of personality in the adjustment to residential care. The study argues that the residential care environment threatens the attributes valued by the two personality modes, resulting in maladjustment, in terms of problematic behaviour and mood. It was

found that, not only did those with higher autonomous and sociotropic scores find it increasingly difficult to adjust to residential care, but they also showed poorer adjustment when compared to the mixed group. These findings do suggest that personality, when investigated in terms of basic personality modes, that are consistent irrespective of dementia, does affect adjustment of older adults with dementia, to residential care.

4.5 METHODOLOGICAL LIMITATIONS

Methodological limitations specific to each research questions have been discussed in the appropriate section above and therefore will not be reiterated here. This section will discuss the further general limitation affected the research.

The representativeness of the older adult population could be questioned because of the low prevalence of males (92% of the population being female). This suggests that the sample within this study may not be truly representative of a sample of older adults with dementia, and therefore the extent to which the results can be generalised is limited. However, having said this, the typical person entering an institution is likely to be a widowed women over the age of 80 (Kahana, Kahana & Riley, 1989), and therefore it could be argued that the sample was representative of an older adult population in residential care.

The demographics of the participants was not controlled for within this study and therefore these factors could have affected the results found within this study. However, there were a number of similarities between the participants within this study. For example, the majority had living in Hull or the surrounding area for the majority of their lives, they were married only once, had one or more children and were all on medication.

The information within this study was gained from seven different residential homes. Some theorist (Lawton, 1977; Moore et al., 1986; Moos & Lemke, 1985; Brennan et al, 1988) have argued that the physical environment of the residential home can influence

the behaviour and well being of the older adults adjustment to residential care. Because the physical features of the different residential home were not controlled for within this study, it could be claimed that different physical environment could impinge of the older adult adjustment to residential care and therefore account for some of the adjustment difficulties found within this research. However, it could also be argued that the facets that threat the attributes valued by those with either autonomous and sociotropic personality modes are present in most residential-care setting (i.e. lack of control, decreased self-reliance, intimacy and long-standing friendships). It has also been suggested (Dabbs, 1999; Burgener et al., 1992; Cohen-Mansfield & Marx, 1992) that it is these aspects of the environment that most impact on a person's adjustment to residential care, as opposed to the physical and architectural features.

The sample size within this study, particularly when the population was split into the three groups, could be considered as small, (i.e. 14 participants in the autonomous group, 13 in the sociotropic group and 36 in the mixed group). However, significant results were found with the samples sizes within each of the three groups. Therefore it may be possible to use the present findings to estimate the power calculation used to validate the SAS.

Due to time and resource limitations, the researcher was not able to observe all the participants within the study and therefore selected 47 participants (i.e. all those in the sociotropic and autonomous groups and 20, at random, from the mixed group). This did mean that the researcher had to split the participants into group before the observation. Steps were taken to account for this, for example, the researcher split the participants into groups at the beginning of the research and wrote a list of people to observe, which

did not state the personality mode. The observations were then conducted, on average, about two-month after, in an attempt to distance the observer as much as possible from the knowledge of the group. However, it should be noted that the observations were not totally independent of the personality component of this research. Having said this, inter-rater reliability for the direct observations was established.

There are methodological limitations of the administration of the SAS, in that it was not stipulated whether the family was rating “pre-morbid” personality. This could therefore impinge on the result pertaining to the stability of personality. What this study would argue is that, theoretically, if the behaviours shown from a younger population with autonomous and sociotropic personality modes were shown to be present in the older adult population, they this offers evidence of stability. However, this was not known at the time the questionnaire was given to the families.

This study used informant-interview and it should be noted that while in some studies this method of collecting data has been shown to be reliable (Sielger et al, 1994) in other studies there have been shown to be discrepancies (Shomaker, 1987). However, due to the disease severity of the participants within this study, this was thought to be the most appropriate method of collecting data.

4.6 STRENGTHS OF THE RESEARCH

Although there are limitations associated with the research, there are also strengths, which overcome several of the limitations of other studies within this area. The strengths included:

- Addressing the validity of the personality measure within this research and therefore measuring aspects of personality that are not affected by the neurological deterioration in dementia.
- The use of a number of different measures for behaviour and mood, to explore the behaviour and mood presentations being investigated within this research.
- Using an observation tool that was highly reliable and investigated the aspects of social interaction this study was particularly interested in.
- Having no significant difference between the cognitive and functional level of the participants within the older adult population, in relation to the dementia.

4.7 **IMPLICATIONS**

4.7.1: Theoretical Implications

This study was an exploratory study and was not specifically designed to contribute to theoretical models of personality or adjustment. However, the results found, pertaining to the affect of personality on adjustment to residential care, do lend support to some theories. Firstly, the results contribute to the theories of Beck (1983, 1987) who suggests that there are aspects of personality, namely autonomy and sociotropy, which remain consistent over time, because they are derived from emotions and temperament. However, he only investigated the modes in relation to a younger adult population. This study investigates the consistency in relation to older adults with dementia and has found that the modes remain stable, irrespective of dementia. The results lend support to the theory of the stability of the modes, and also the assertion that, because modes are derived from emotions and temperament, they are thought to be a function of the older brain structure. The result in this study show this is the case, because neurological deterioration is widespread throughout the neo-cortex with dementia, but the older brain structures are relatively unaffected, and personality modes are evident within this population.

Secondly, the result suggests that there are aspects of personality that remain consistent irrespective of dementia, and therefore personality can play a role in the experience of the person with dementia. One of the barriers preventing investigation in the influence of personality on the experience of those with dementia, was the argument that personality was not stable and, in fact, is disturbed as a result of dementia (Swearer,

1994; Petry et al, 1988; Sungal & Grockett, 1993). This argument is so prevailing that even the definition of dementia includes “changed personality” (Lishman, 1998). This research suggest that there are some aspect of personality that remain stable, irrespective of dementia, and therefore challenges this contention.

Thirdly, there is support for the view that behaviours presentation and mood difficulties are not simple a result of bio-medical aspects of dementia, as proposed by some researcher (Petry et al, 1988; Swearer et al., 1996). These researchers generally suggest that problematic behaviour and mood difficulties are simply a result of deterioration of brain tissue with the dementing illness. This study specifically investigated aspects of personality that would be relatively unaffected by deterioration, and found results that suggested that problematic behaviour and mood difficulties are related to these aspects of personality. To take this one step further, the results contribute to the theories of Kitwood (1990, 1995, 1997) and Stokes (1995b, 2000) that, in some part, behaviour presentation and mood difficulties involves communication from the older adults about their feelings and needs (Kitwood, 1990) and are driven by the person within (Stokes 2000).

4.7.2 Clinical Implications

From the results of this study it is possible to conclude that the SAS has an adequate discriminatory ability for the aspects of personality in an older adult (dementia) population. In addition, the personality modes remain relatively unaffected by the neurological deterioration in dementia and therefore the results offer construct validity to the SAS. This suggests that the SAS can be used as a valid measure of personality in

clinical practice, with older adults with dementia. However, because of the methodological limitation within this study, the SAS should be used with caution.

This study generates queries over the use of the NEO-PI as a measure of personality with older adults with dementia, due to the evidence that some of the aspects of personality measured by the NEO-PI are shown to be inconsistent over time and susceptible to change with dementia.

These results support for the view that, for some people 'temperament' may affect adjustment to residential care. This therefore suggests that personality should be assessed prior to a move to residential care in order that interventions are tapered to the person's need i.e. those with autonomous and sociotropic personality modes will require particular help to prevent the development of difficulties associated with adjustment. This study has highlighted the potential difficulties for that person when attempting to adjustment to residential care, due to their personality. Future psychosocial interventions studies, based on these findings study, should be developed to further evaluate the theoretical position that has been developed within this study.

It is also possible to conclude that the direct observation within this study was a reliable measure of behaviour, particularly in terms of social relationships and interaction, within a residential care setting. Having said this, the results in this study were inconclusive pertaining to the well-being / ill-being measure within this observation and therefore no conclusion can be made about this aspect of the observation, although the scale has been found to be highly reliable in other research studies (Bradford Dementia Group, 1997).

4.8 DIRECTIONS FOR FUTURE RESEARCH

A shortened 17 item version of the SAS, that has been used in a younger sample of depressed people, could be implemented in future research with people with dementia living in care, perhaps prior to or just or just after entry to care, to develop person specific disability intervention. This would allow for the individual to fill in the personality questionnaire themselves, and also allow analysis of thought and feelings of the individual in the early stages of the dementia using interviews with the individual (Mozley et al., 1999). This would add support to evidence to date, that personality affects adjustment to residential care.

Another area of future research is to develop understanding about the person-environment fit on the basis of personality modes (sociotropic / autonomous) including the importance of assisting the individual to build meaningful relationships which will reduce the threat associated with interpersonal relationships (O'Conner & Vallerand, 1994).

In addition, although reliability of the SAS as an informant-interview was found within this study, further inter-rater reliability (i.e. using two independent sources to complete the SAS questionnaire, for example two close relatives of the resident) of this method could confirm the SAS can be used as an informant-interview.

Furthermore, more in-depth qualitative analysis of adjustment to residential care could be completed, to explore more about behaviour in terms of communication. This could

be completed using qualitative psychoanalytical observational techniques, to investigate in more depth the ideas put forward by Bion (1962), Davenhill (1998), Kitwood (1990) and Stoke (2000), that the behaviour presentation may be a form of communication from the individual, about the distress they are experiencing in their the environment.

The measure of depression used within this research was selected because it had been specifically designed to rate symptoms of depression in demented patients (Alexopolous et al., 1988). However, it did not discriminate between different types of depression, for example a more withdrawn depression with the autonomous group. Further investigation would into the different presentations of depression in an older adult population with dementia would useful, to add support to the idea that these aspects of personality will show different presentation of mood problems.

Finally, it could prove useful to conduct further research using a longer observation period, and observation of the same individual over different periods of the day. This might adds rich information to the behaviour presentation of the individuals in relation to their personality.

4.9 CONCLUSION

This study has identified that there are aspects of personality that remain consistent over time, irrespective of the neurological deterioration in dementia and these aspects of personality affect adjustment to residential care, for older adults with dementia. To the researcher knowledge, this is the first study that has investigated aspects of personality that remain stable over time, irrespective of dementia. This demonstrates that, due to the personality modes being a function of the older brain structures, there are aspects of personality that can influence the experience of adjustment to residential care and can result in problematic behaviour and mood problems as a communication of poor adjustment to residential care, regardless of the severity of the dementia. Therefore this promotes the idea that a person presentation's is not simply a result of the deterioration of brain tissue. This supports the work that has been developing in the last decade, which promotes a move away from biomedical formulations and towards more person-centred approach to care of older adults with dementia. It contributes to the notion that the person with dementia should be continued to be thought about as a person suffering from a disease, rather than simply thinking about the disease itself.

In conclusion, the primary importance that is given to personality all through life should be continued to be considered as important regardless of age or dementia. It is necessary to acknowledge the personality of the individual with dementia, so that the needs and communication of that individual are always being considered and in orders for appropriate resources to be allocated to address these needs. Although there may be some unavoidable changes to some aspects of personality due to the presence of dementia, this does not mean that the person that was known has completely

disappeared. It is dangerous to think in these terms, because, once we are in the mind set that, at some point, the person disappears, then we get into a very dangerous area dehumanisation.

There is no denying that dementia is a very painful process, and is difficult to experience, for the individual themselves and also for the staff and the family. However, the more we stop considering the individual themselves, the more we are heading towards dangerous territory. This is by no means easy and can only be possible with continued research, training, supervision and acknowledgement and honesty about the difficulty of this type of work.

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APPENDIX I – CONSENT FORM

Centre Number:
Study Number:
Participants Identification number for this trial:

GUARDIAN ASSENT FORM

Title of Project: Is personality associated with difficult adjustment and distress in people with dementia, in residential care?

Name of Researcher: Clare Hilton

Assent for: _____

- 1. I confirm that I have read and understood the information sheet date 17th June 2002, (version 3) for the above study and have had the opportunity to ask questions.
- 2. I understand that giving my assent for the above named individuals participation is voluntary and that we are free to withdraw at any time, without giving a reason and without their care being affected.
- 3. I understand that a responsible individual will conduct interviews with myself. I am aware that observations will take place.
- 4. I give assent for the above named person to take part in the study and I give consent for the researcher to contact myself.

Name of Person Date Signature

Name of person taking consent
(if different from the researcher) Date Signature

CLARE HILTON 17.06.02 Clare H
Researcher Date Signature

APPENDIX II – POSTAL PACK

THE UNIVERSITY OF HULL DEPARTMENT OF CLINICAL PSYCHOLOGY

SCHOOL OF MEDICINE • HULL HU6 7RX • UNITED KINGDOM
TELEPHONE 01482 465933 • FACSIMILE 01482 466155 • E-MAIL B.J.Leak@hull.ac.uk

Information about the Research

You and your family member are being invited to take part in a research study, which is trying to find a link between personality and adjusting to life in residential homes.

Before you decide that you would like to take part, it is important for you to know why the research is being done and what will be involved. Please take your time to read the following information, and discuss it with anyone you want to. My name and address are at the end of this sheet if there is anything that you are not clear about or if you would like any further information.

Thank you for taking the time to read this information

What is the Purpose of the Study?

This study is looking at personality and the way it shapes you as a person in residential care. We all know that there are certain situation in which we are more comfortable, activities we prefer and ways that we react. These things can be very different from person to person. No one way of doing things is better than another, it is just different, because each person has a different personality. Personality consists of number features, some which change over time and some don't. This study wants to investigate the features that stay the same and look at how these affect the way people react to living in a residential home, eventually to try to provide advice on how to improve a person's introduction to residential care.

The study wishes to investigate personality (using a questionnaire and interview) and adaptation (via observation). This will allow investigation into the relationship between personality and adapting to living in residential care. The research will be completed over three months.

Why have we been Chosen?

This home has been selected, along with a number of homes in the area, and I am asking every resident if they would like to be included.

Do we have to take Part?

NO! If you decide to take part you will be asked to sign a consent form both for yourself and for your family member to take part in the study.

You do not need to answer all the questions and you are free to withdraw at any time.

What will happen to me if we agree?

The researcher will ask for an informal interview and completion of a questionnaire. This will take around one hour in total. The interview will be arranged at a time and place of your convenience and the questionnaires will be completed at that time.

Since this study is looking at differences between people, we need to make comparisons. There are a number of things that are different between people, such as what they did for a living, religious beliefs and so on. Such questions will be asked in the interview.



What do we have to do?

Complete the questionnaire and have a short interview with the researcher. There will also be a researcher who spends time in the home. Observations will be as discreet as possible.

What are the possible disadvantages of taking part?

The study will need at least an hour of your time for the questionnaires and interview, also, observation maybe uncomfortable.

What are the possible advantages of taking part?

This investigation may increase awareness and understanding of a person's reactions to situations and help to ease settling into residential care.

What if problems arise during the study that require further input?

The only possible risk in this study is that it may highlight small psychological issues. Should this come to light, this will be discussed with you and an appropriate course of action agreed.

Will taking part in this study be kept confidential?

YES! Questionnaires will be made anonymous, and recorded interviews will be destroyed following transcription.

What will happen at the end research study?

Upon completion of the study, you will not be disturbed again, unless you wish to receive the results. In this case, you can let me know at the time the study is conducted.

Who has reviewed the study?

1. Hull and East Riding Local Research Ethics Committee.
2. Research and Development Department, West House.

Contact for further Information:

Clare Hilton
Tel: 07811114538
Add: University of Hull
Department of Clinical Psychology
School of Medicine
Hull
HU6 7RX

If you do have any queries please do not hesitate to contact me. Whether of not you decide to take part in this research project, I would like to thank you for taking the time to read the information.

Yours sincerely,

Clare Hilton

APPENDIX III – OUTCOME MEASURES

APPENDIX III (a) – OUTCOME MEASURES:

THE SOCIOTROPY AUTONOMY SCALE (SAS)

Name:

Sex: M / F Age:

Date:

INSTRUCTIONS

The questionnaire is to investigate personality of the above named person as you see them.

Please indicate how much the statements below apply to the above named person by ticking the appropriate box.

	Always	Most of the time	Half the time	Sometimes	Never
1. They feel / felt they had to be nice to other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. It is/ was important to them to be free and independent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. It is/ was more important for them to know that they had done a good job, rather than others knowing it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. It is/ was more enjoyable for them to share their experiences with other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. They are/ were afraid of hurting other people's feelings.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. They get frustrated when other people try to help them with activities or direct their behaviour.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. They find/ found it difficult to say "no" to people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. They feel/ felt bad if they did not have social plans for the weekend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. They are/ were happier when they were on their own, compared to being in a group.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. When they are ill, they prefer to be left alone.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. They are/ were concerned that if other people knew their faults and weaknesses they would not like them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. If they feel/ felt right about something they expressed themselves, even if others didn't like it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. When visited by people, they would rather get up and do something rather than sit and talk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. It is/ was more important for them to their own objectives, rather than those of other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. They do/ did things that were not in their best interests in order to please other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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| 16. They like/liked spending time alone. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. They are/were more concerned with people liking them than they are/were about their achievement. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. They are/were uncomfortable about eating out alone. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 19. They need/needed to know that someone in their life cares about them, in order to enjoy activities. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20. They are/were not influenced by other in the decisions they make/made | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 21. They like/liked to be as free as possible. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 22. They value/valued work accomplishments more than they value/valued friends | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 23. They like/liked being in control of their emotions. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 24. They feel/felt uncomfortable in situations when they are not sure what is expected of them. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 25. They prefer/preferred to help other than receive help themselves. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26. They would not enjoy travelling to new places alone | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 27. If someone has not called for a while they get/got worried that he/she has forgotten them. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 28. They feel/felt it is/was more important to achieve things that to have close relationships with other people. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 29. They got uncomfortable around people that they feel/felt disliked them. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 30. If a goals is/was important to them, they will/would pursue it, even if it made other people feel uncomfortable. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 31. They find/found it difficult to be separated from the people they love. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 32. When they achieved something they got more satisfaction from that achievement than the praise. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 33. They censor what they say because they are concerned that other people might disapprove. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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| 34. They get/got lonely when they are by themselves. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 35. They often think about family and friends | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 36. They prefer/preferred to make their own plans, rather than being controlled by others. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 37. They could comfortably be by themselves all day without feeling a need for someone around. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 38. If someone criticised their appearance, they do/did not feel attractive to other people. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 39. It is/was more important to them to get a job done than to worry about people's reaction. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 40. They like to spend their free time with others | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 41. When they have/had a problem, they tend to withdrawal by themselves rather than talk to other people. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 42. They feel/felt that in relationships people are often too demanding of each other. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 43. They are/were uneasy if they could not tell whether someone liked them or not. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 44. They tend to want to set standards / goals for themselves rather than accepting other peoples. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 45. They apologise more than they need to. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 46. They feel/felt it is important to be like and approved of by others. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 47. They enjoy/enjoyed accomplishing things more than being given credit for them. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 48. Having close bonds with other people makes/made them feel secure. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 49. When they are with other people they look/looked for signs whether they like being with them. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 50. They liked to go off by themselves, exploring new places. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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| 51. When they think/thought someone was upset with them, they want to apologise. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 52. They like to know that there is someone close to contact, if anything happens to them. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 53. They feel/felt confined when they have/had to sit through long meetings. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 54. They do not like their privacy invaded. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 55. They feel/felt uncomfortable being a non-conformist. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 56. "The worst thing about being in jail would be not being able to move around freely" How much would they agree? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 57. They feel/felt the worst thing about growing old is being left alone. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 58. They worry that someone they love will die | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 59. The possibility of being rejected by other for standing up for their right would not stop them. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

APPENDIX III (b)– OUTCOME MEASURES:

**CLIFTON ASSESSMENT PROCEDURE FOR THE ELDERLY,
COGNITIVE ASSESSMENT SCALE AND BEHAVIOUR RATING
SCALE (CAPE-CAS/BRS)**

CLIFTON ASSESSMENT PROCEDURES FOR THE ELDERLY (CAPE)

Cognitive Assessment Scale

Name:

Current address/placement:

Date of birth: Occupation:

Information/Orientation

Name:	Hospital/Address:	Colour of British Flag:	
Age:	City:	Day:	
D.o.B.	P.M.:	Month:	
Ward/Place:	U.S. President:	Year:	I/O Score

Mental Ability

Count 1-20	Time:.....Errors:.....	Alphabet	Time:.....Errors:.....	
≤10 secs - no errors	3	≤10 secs - no errors	3	
≤30 secs - no errors	2	≤30 secs - no errors	2	
≤30 secs - 1 error	1	≤30 secs - 1 error	1	
	0		0	
Write name:		Reading: (See overleaf)		
Correct and legible	2	10 words or more	3	
Can write but not correctly	1	6-9 words	2	
Not able to	0	1-5 words	1	
		0 words	0	
				MAb Score
Psychomotor	Time:.....Errors:.....			Pm Score

Scoring

Errors: 0-12	13-24	25-36	37-48	49-60	61-72	73-84	85-96	96+	N/C	N/A
Score: 10	9	8	7	6	5	4	3	2	1	0
Add Bonus 2 if 60 secs or under; 1 if 120 secs or under										

Assessed by:

Date:

Behaviour Rating Scale

Date of birth:

address/placement:

Give the appropriate number for each item

- When bathing or dressing, he/she requires:
 - no assistance 0
 - some assistance 1
 - maximum assistance 2
- With regard to walking, he/she:
 - shows no signs of weakness 0
 - walks slowly without aid, or uses a stick 1
 - is unable to walk, or if able to walk, needs frame, crutches or someone by his/her side 2
- He/she is incontinent of urine and/or faeces (day or night):
 - never 0
 - sometimes (once or twice per week) 1
 - frequently (3 times per week or more) 2
- He/she is in bed during the day (bed does not include couch, settee, etc):
 - never 0
 - sometimes 1
 - almost always 2
- He/she is confused (unable to find way around, loses possessions, etc):
 - almost never confused 0
 - sometimes confused 1
 - almost always confused 2
- When left to his/her own devices, his/her appearance (clothes and/or hair) is:
 - almost never disorderly 0
 - sometimes disorderly 1
 - almost always disorderly 2
- When allowed outside, he/she would:
 - never need supervision 0
 - sometimes need supervision 1
 - always need supervision 2
- How often he/she helps out in the home/ward:
 - often helps out 0
 - sometimes helps out 1
 - never helps out 2
- How often he/she keeps him/herself occupied in a constructive or useful activity (works, reads, plays games, has hobbies, etc):
 - almost always occupied 0
 - sometimes occupied 1
 - almost never occupied 2
- How often he/she socialises with others:
 - does establish a good relationship with others 0
 - has some difficulty establishing good relationships 1
 - has a great deal of difficulty establishing good relationships 2
- How often he/she is willing to do things suggested or asked of him/her:
 - often goes along 0
 - sometimes goes along 1
 - almost never goes along 2

12. He/she understands what you communicate to him/her (you may use speaking, writing, or gesturing):

- understands almost everything you communicate
- understands some of what you communicate
- understands almost nothing of what you communicate

13. He/she communicates in any manner (by speaking, writing or gesturing):

- well enough to make him/herself easily understood at all times
- can be understood sometimes or with some difficulty
- can rarely or never be understood for whatever reason

14. He/she is objectionable to others during the day (loud or constant talking, pilfering, soiling furniture, interfering with affairs of others):

- rarely or never
- sometimes
- frequently

15. He/she is objectionable to others during the night (loud or constant talking, pilfering, soiling furniture, interfering in affairs of others, wandering about, etc.):

- rarely or never
- sometimes
- frequently

16. He/she accuses others of doing him/her bodily harm or stealing his/her personal possessions — if you are sure the accusations are true, rate zero, otherwise rate one or two:

- never
- sometimes
- frequently

17. He/she hoards apparently meaningless items (wads of paper, string, scraps of food, etc.):

- never
- sometimes
- frequently

18. His/her sleep pattern at night is:

- almost never awake
- sometimes awake
- often awake

Eyesight: (tick which applies)

- can see (or can see with glasses)
- partially blind
- totally blind

Hearing: (tick which applies)

- no hearing difficulties, without hearing aid
- no hearing difficulties, though requires hearing aid
- has hearing difficulties which interfere with communication
- is very deaf

Rated by: Date:
Staff/Relative

Report Form

Name: Age:

Current address/placement:

Date of birth: Marital status:

Relevant background information (rated sensory impairment, occupation, accommodation, etc.)

CAS Scores

Information/Orientation:.....

Mental ability:

Psychomotor:.....

CAS Total

BRS Scores

Physical disability:

Communication difficulties:

Apathy:

Social disturbance:

BRS Total

Dependency Grade

Cognitive:

Behavioural:

Overall:

Recommendations

Assessed by Date:

APPENDIX III (c) – OUTCOME MEASURES:

CHALLENGING BEHAVIOUR OBSERVATION SCALE (CBOS)

APPENDIX III (d) – OUTCOME MEASURES:

CHALLENGING BEHAVIOUR SCALE (CBS)

THE CHALLENGING BEHAVIOUR SCALE (CBS) FOR OLDER PEOPLE LIVING IN CARE HOMES

Name

Age Sex ... M / F Diagnosis of Dementia ... Y / N / Don't know

Residence Date

Checklist Completed By

PHYSICAL ABILITY (delete as applicable)

1. Able to walk unaided / Able to walk with aid of walking frame / In a wheelchair
2. Continent / Incontinent of urine / Incontinent of faeces / Incontinent of urine + faeces
3. Able to get in or out of bed/chair unaided / needs help to get in or out of bed/chair
4. Able to wash and dress unaided / needs help to wash and dress
5. Able to eat and drink unaided / needs help to eat and drink

Over the page is a list of challenging behaviours that can be shown by older adults in residential or nursing settings.
For each behaviour listed consider the person over past 8 weeks and mark:

INCIDENCE: Yes / Never. If Yes move to Frequency

FREQUENCY:

- 4: This person displays this behaviour **daily or more**
- 3: This person displays this behaviour **several times a week**
- 2: This person displays this behaviour **several times a month**
- 1: This person displays this behaviour **occasionally**

DIFFICULTY:

Then *for each behaviour shown* mark down how difficult that behaviour is to cope with, when that person shows it, according to the following scale:

- 4: This causes a lot of problems
- 3: This causes quite a lot of problems
- 2: This is a bit of a problem
- 1: This is not a problem

N.B. If a person does not show a behaviour no frequency or difficulty score is needed.

If the person causes a range of difficulty with anyone behaviour, mark down the score for the worst it has been over the last few (eight) weeks.

CHALLENGING BEHAVIOUR	INCIDENCE		FREQUENCY		DIFFICULTY		CHALLENGE				
	Yes	Never	1-occasionally	2-several/month	3-several/week	4-daily or more	1=no problem	2=bit of problem	3=quite a lot of problem	4=lots of problems	Frequency x Difficulty
Physical Aggression (hits, kicks, scratches, grabbing, etc.)											
Verbal Aggression (insults, swearing, threats, etc.)											
Self Harm (cuts/hits self, refuses food/starves self, etc.)											
Shouting											
Screaming/Crying out											
Perseveration (constantly repeating speech or actions, repetitive questioning or singing)											
Wandering (walks aimlessly around home)											
Restlessness (fidgets, unable to settled down, pacing, 'on the go', etc.)											
Lack of motivation (difficult to engage, shows no interest in activities, apathy, etc.)											
Clinging (follows/holds on to other residents/staff, etc.)											
Interfering with other people											
Pilfering or Hoarding (possessions, rubbish, paper, food, etc.)											
Suspiciousness (accusing others, etc.)											
Manipulative (takes advantage of others, staff, etc.)											
Lack of Self Care (hygiene problems, dishevelled, etc.)											
Spitting											
Faecal Smearing											
Inappropriate Urinating (in public, not in toilet, etc.)											
Stripping (removes clothes inappropriately, flashes, etc.)											
Inappropriate Sexual Behaviour (masturbates in public, makes inappropriate 'advances' to others, etc.)											
Sleep Problems (waking in night, insomnia, etc.)											
Non-compliance (deliberately ignores staff requests, refuses food, resists self care help, etc.)											
Dangerous Behaviour (causes fires or floods, etc.)											
Demands Attention											
Lack of Occupation (sits around doing nothing, etc.)											
TOTALS	Add scores (1 – 25) for each column		25		100		100		400		

STAFF `PROMPT` SHEET

HOW OFTEN DOES THE PROBLEM / BEHAVIOUR OCCUR?

- 4: This person displays this behaviour **daily or more**
- 3: This person displays this behaviour **several times a week**
- 2: This person displays this behaviour **several times a month**
- 1: This person displays this behaviour **occasionally**
- 0: This behaviour is **never** displayed by this person

HOW MUCH OF A PROBLEM IS THIS BEHAVIOUR?

- 4: This causes **a lot** of problems
- 3: This causes **quite a lot** of problems
- 2: This causes **a bit** of a problem
- 1: This is **not** a problem

WE ARE INTERESTED IN THE WORST THE RESIDENT HAS BEEN OVER THE LAST TWO MONTHS.

If a person does not show a behaviour no difficulty (or problem) score is needed.

If the person causes a range of difficulty with any one behaviour, mark down the score for the worst it has been over the last few weeks.

APPENDIX III (e) – OUTCOME MEASURES:

THE BEHAVIOUR ASSESSMENT SCALE FOR LATER LIFE

(BASOLL) – MOOD DISTURBANCES

Mood	Description <i>Does that mean that he/she ...?</i>	Comments & notes
25 Does he/she wake up at night?	0 Very rarely. 1 Has done in the past. 2 Has done in the past week. 3 Wakes every night.	Bed time Rising time (a) Does he/she seem confused at night? (b) Does he/she have problems getting off to sleep? (c) Does he/she wake up repeatedly through the night?
26 Does he/she complain of feeling depressed?	0 Very rarely. 1 Has in the past. 2 Has in the past week. 3 Daily.	
27 Does he/she express thoughts about suicide, death?	0 Never. 1 Has in the past. 2 Has in the past week. 3 Daily.	
28 Is he/she continually 'going on' about things, eg. his/her bowels, cleanliness, checking safety measures, plugs, locks?	0 Never. 1 Has in the past. 2 Has in the past week. 3 Daily.	
29 Does he/she complain of poor appetite/inability to eat?	0 Never. 1 Has in the past. 2 Has in the past week. 3 Daily.	Does the client say why he/she cannot eat? Does the client appear to have lost weight lately?
30 Does he/she act in a suspicious or secretive manner?	0 Never. 1 Has in the past. 2 Has in the past week. 3 Daily.	Give a full description.
31 Does he/she see or hear things that are not there?	0 Never. 1 Has in the past. 2 Has in the past week. 3 Daily.	Give a full description.
32 Does he/she imagine strange things or have odd thoughts, eg. that he/she has a terminal illness?	0 Never. 1 Has in the past. 2 Has in the past week. 3 Daily.	Give a full description.
33 Does he/she think others are trying to do him/her harm or plotting against him/her?	0 Never. 1 Has in the past. 2 Has in the past week. 3 Daily.	Give a full description.

Add all the scores in column 2 for items 25–33 to get the TOTAL MOOD SCORE. Transfer score to summary sheet.

APPENDIX III (f) – OUTCOME MEASURES:

THE CORNELL SCALE OF DEPRESSION (CORNELL)

Cornell Scale for Depression in Dementia

(to be administered by the Clinician)

Name:..... Age:..... Sex:..... Date:.....

Address:..... Tel:.....

Inpatient

Nursing Home Resident

Outpatient

Scoring System

a = Unable to evaluate
0 = Absent

1 = Mild or Intermittent
2 = Severe

Ratings should be based on symptoms and signs occurring during the week prior to interview.
No score should be given if symptoms result from physical disability or illness.

A) Mood - Related Signs

- | | | | | | |
|----|---|---|---|---|---|
| 1) | Anxiety
<i>anxious expression, ruminations, worrying</i> | a | 0 | 1 | 2 |
| 2) | Sadness
<i>sad expression, sad voice, tearfulness</i> | a | 0 | 1 | 2 |
| 3) | Lack of reactivity to pleasant events | a | 0 | 1 | 2 |
| 4) | Irritability
<i>easily annoyed, short tempered</i> | a | 0 | 1 | 2 |

B) Behavioural Disturbance

- | | | | | | |
|----|--|---|---|---|---|
| 5) | Agitation
<i>restlessness, hand wringing, hair pulling</i> | a | 0 | 1 | 2 |
| 6) | Retardation
<i>slow movement, slow speech, slow reactions</i> | a | 0 | 1 | 2 |
| 7) | Multiple physical complaints
<i>(score 0 if GI symptoms only)</i> | a | 0 | 1 | 2 |
| 8) | Loss of interest
<i>less involved in usual activities, (score only if change occurred acutely ie. In less than 1 month)</i> | a | 0 | 1 | 2 |

C) Physical Signs

- | | | | | | |
|-----|---|---|---|---|---|
| 9) | Appetite loss
<i>eating less than usual</i> | a | 0 | 1 | 2 |
| 10) | Weight loss
<i>(score 2 if greater than 5lb in 1 month)</i> | a | 0 | 1 | 2 |
| 11) | Lack of energy
<i>fatigues easily, unable to sustain activities (score only if change occurred acutely ie. In less than 1 month)</i> | a | 0 | 1 | 2 |

APPENDIX III (g) – OUTCOME MEASURES:

RATING ANXIETY IN DEMENTIA SCALE (RAID)

PATIENTS NAME:

DOB:

HOSPITAL NO:

RATER'S NAME:

OCCUPATION:

Patients status at evaluation:

1. In patient 2. outpatient 3. day hospital/day centre patient 4. Other (specify).....

Scoring system:

U. unable to evaluate 0. absent 1. mild or intermittent 2. moderate 3. severe

Rating should be based on symptoms and signs occurring during two weeks prior to the interview.

No score should be given if symptoms result from physical disability or illness.

Total score is the sum of items 1 to 18. A score of 11 or more suggests significant clinical anxiety.

Score

WORRY	1.	Worry about physical health	
	2.	Worry about cognitive performance. (failing memory, getting lost when goes out, not able to follow conversation.)	
	3.	Worry over finances, family problems, physical health of relatives.	
	4.	Worry associated with false belief and /or perception	
	5.	Worry over trifles. (repeatedly calling for attention over trivial matters)	
APPREHENSION & VIGILANCE	6.	Frightened and anxious (keyed up and on the edge)	
	7.	Sensitivity to noise. (exaggerated startle response)	
	8.	Sleep disturbance. (trouble falling or staying asleep)	
	9.	Irritability (More easily annoyed than usual, short tempered and angry outbursts.)	
MOTOR TENSION	10.	Trembling	
	11.	Motor tension (complain of headache, other body aches and pains.)	
	12.	Restlessness (fidgeting, could not sit still, pacing, wringing hands, picking clothes.)	
	13.	Fatigueability, Tiredness	
AUTONOMIC HYPERSENSITIVITY	14.	Palpitations (complains of heart racing or thumping)	
	15.	Dry mouth, (not due to medication) Sinking feeling in the stomach.	
	16.	Hyperventilating, shortness of breath (even when not exerting)	
	17.	Dizziness or light-headedness (complains as if going to faint.)	
	18.	Sweating, flushes or chills, tingling or numbness of fingers and toes.	
PHOBIAS: (fears which are excessive, that do not make sense and tend to avoid-like afraid of crowds, going out alone, being in a small room, or being frightened by some kind of animals, heights etc.) DESCRIBE			
PANIC ATTACKS: (Feeling of anxiety or dread that are so strong that think they are going to die or have a heart attack and they simply have to do something to stop them, like immediately leaving the place, phoning the relatives etc.) DESCRIBE			

**APPENDIX IV – DISTRIBUTION OF THE PARTICIPANTS ON
THE OUTCOME MEASURES**

Table (iv) a: showing the Kolmogorov-Smirnov test for the CAS & BRS (n=63)

Kolmogorov-Smirnov Test of Normality			
Analysis	Statistics	D.F.	Sig.
CAS: Auto	.182	14	.200
CAS: Socio	.212	13	.142
CAS: Mixed	.175	36	.006
BRS: Auto	.259	14	.011
BRS: Socio	.180	13	.200
BRS: Mixed	.149	36	.033

Table (iv) b: Kolmogorov-Smirnov test for the BASSOLL – mood (n=63)

Kolmogorov-Smirnov Test of Normality			
Analysis	Statistics	D.F.	Sig.
BASSOLL auto normality	.168	14	.200
BASSOLL socio normality	.195	13	.189
BASSOLL mixed normality.	.202	36	.001

Table (iv) c: Kolmogorov-Smirnov test for the Cornell (n=63)

Kolmogorov-Smirnov Test of Normality			
Analysis	Statistics	D.F.	Sig.
Cornell auto normality	.166	14	.200
Cornell socio normality	.199	13	.169
Cornell mixed normality.	.155	36	.029

Table (iv) d: Kolmogorov-Smirnov test for the RAID (n=63)

Kolmogorov-Smirnov Test of Normality			
Analysis	Statistics	D.F.	Sig.
RAID auto normality	.113	14	.200
RAID socio normality	.178	13	.200
RAID mixed normality.	.190	36	.002

Table (iv) e: Kolmogorov-Smirnov test for the CBS categories (n=63)

	A/S/M	Statistics	df	Sig
Physical Aggression	A	.263	14	.009
	S	.310	13	.001
	M	.529	36	.000
Verbal Aggression	A	.192	14	.169
	S	.258	13	.018
	M	.506	26	.000
Shouting	A	.227	14	.049
	S	.257	13	.019
	M	.517	36	.000
Non-Compliance	A	.262	14	.010
	S	.213	13	.111
	M	.497	36	.000
Manipulation	A	.430	14	.000
	S	.399	13	.000
	M	.539	36	.000
Clinging	A	.502	14	.000
	S	.172	13	.200
	M	.452	36	.000
Demand Attention	A	.401	14	.001
	S	.197	13	.001
	M	.539	36	.000
Scream / Cry out	A	.310	14	.001
	S	.320	13	.001
	M	.539	36	.000
Lack Motivation	A	.232	14	.040
	S	.282	13	.006
	M	.297	36	.000
Lack of Occupation	A	.270	14	.007
	S	.233	13	.051
	M	.304	36	.000

Sleep	A	.194	14	.166
	S	.266	13	.021
	M	.321	36	.000
Restlessness	A	.337	14	.000
	S	.215	13	.103
	M	.321	36	.000
Wandering	A	.263	14	.009
	S	.284	13	.005
	M	.320	36	.000
Suspiciousness	A	.291	14	.002
	S	.383	13	.000
	M	.539	36	.000

Table (iv) f: Kolmogorov-Smirnov test for the Direct Observation categories (n=47)

	A/S/M	Statistics	df	Sig
ISOLATION				
Doing Nothing	A	.384	14	.000
	S	.214	13	.107
	M	.343	20	.000
Asleep	A	.365	14	.000
	S	.249	13	.026
	M	.171	20	.126
Not Observable	A	.175	14	.200
	S	.388	13	.000
	M	.462	20	.000
Watching	A	.232	14	.039
	S	.184	13	.200
	M	.090	20	.200
Food (No interaction)	A	.348	14	.000
	S	.254	13	.020
	M	.255	20	.001
Wandering (No inter)	A	.204	14	.009
	S	.339	13	.000
	M	.382	20	.000
INTERACTION				
Total Interaction	A	.115	14	.200
	S	.205	13	.140
	M	.133	20	.200
Total + Interaction	A	.429	14	.000
	S	.272	13	.009
	M	.194	20	.047
Total - Interaction	A	.134	14	.200
	S	.239	13	.041
	M	.329	20	.000
Initiation of Interact	A	.327	14	.000
	S	.287	13	.004
	M	.221	20	.000

PURPOSE				
Self-Care	A	.286	14	.003
	S	.218	13	.093
	M	.106	20	.200
Social	A	.429	14	.000
	S	.270	13	.010
	M	.193	20	.050
Other	A	.283	14	.003
	S	.393	13	.000
	M	.469	20	.000

Table (iv) g: Kolmogorov-Smirnov test for the Observed Challenging Behaviour (n=63)

	A/S/M	Statistics	df	Sig
Total Problem Behav	A	.213	14	.086
	S	.314	13	.000
	M	.407	20	.000
Avoidant / Aggressive	A	.388	14	.022
	S	.255	13	.000
	M	.467	20	.000
Attention / Anxious	A	.388	14	.000
	S	.255	13	.020
	M	.467	20	.000

APPENDIX V: PILOT STUDY

PILOT STUDY-NON-CLINICAL POPULATION

INTRODUCTION

This study wishes to investigate a personality measure that has been developed by Beck (1983) to specifically investigate two aspects of personality that are thought to remain consistent throughout life. These aspects of personality, the Beck termed Personality modes, are called Autonomy and Sociotropy and the measure is named the Sociotropy / Autonomy Scale (SAS). It is a 60-statement measure used extensively to analyse personality characteristics – containing 30 sociotropic and 30 autonomous items, each item rated on a 5-point scale from 0-100. Therefore, for both the autonomous and sociotropic scales (SAS-A and SAS-S, respectively) the maximum total score is 3000, with a mean of 1500.

This scale however, was validated on an outpatient, depressed, clinical sample. Although the SAS has been utilised as a measure of personality for non-clinical sample (i.e. Sun et al., 1999, Mak, 2001) it has not been validated for the purpose, therefore has not been validated with a non-clinical sample. This study attempts to validate the scale by investigating its properties with a non-clinical sample.

It was predicted by Beck (1983, 1987) that firstly, the total score on the SAS would resemble a normal distribution, whereby the majority of the population would fall in the middle range (i.e. less than 2 stand deviations (SD) away from the mean) and fewer people would fall at the extreme ends of the SAS-A or SAS-S (i.e. 2 or more SD away from the mean). Secondly, Beck states that a person would not score highly on both the

autonomous and sociotropic scales because the two personality modes value very different things. For example, an autonomous statement is “I can only rely on myself to get what I want”, whereas a sociotropic statement is “I need other people’s help in order to carry out my goals”. Therefore, the that the population would be able to fall into three groups, based on the total scores, those being autonomous group, sociotropic group and mixed / majority group.

This pilot study will investigate whether the total scores on the SAS of a non-clinical sample reflect the expected distribution and properties of the original clinical sample, offering the SAS face validity with a non-clinical sample. If the expected mean falls within confidence interval then the sample can be interpreted as the original clinical sample.

Therefore, this study is investigating the research question: will the SAS be able to discriminate the dimensional aspects of the personality modes in a non-clinical sample, with the following hypothesis:

1. The SAS will reflect the dimensional aspects of personality in a non-clinical UK population

METHOD

1.1 DESIGN

The research aim and hypothesis comprising the pilot study used a quasi-experimental single sample design. The sample was collected to test whether autonomous and sociotropic personality modes are normally distributed over a general population, due to the fact that the SAS has been tested on a psychiatric sample alone.

1.2 PROCEDURE

1.2.1 Ethical Approval

Ethical consent was gained from the Hull and East Riding Local Research Ethics and Research and Development Department, West House Approval.

1.2.2 Participants

The study selectively sampled 100 participants. The participants were recruited through an opportunistic sample. The participants that were excluded were those with psychiatric history, with a diagnosis of dementia, or those who did not live independently.

All the participants in the present study were asked to provide the following additional information:

- Age
- Sex
- Martial status
- Employment status

Table 1.1-1.4 below, summarise the above demographics variables from the pilot sample.

1.2.3 Measures

This pilot study used one psychometric instrument, namely the Sociotropy-Autonomy Scale (SAS) – (Beck, 1989). The structure and psychometric properties of the scale have been outlined below.

1.3.1 (a) Sociotropy-Autonomy Scale (SAS)

DEVELOPMENT & STRUCTURE: DEVELOPMENT & STRUCTURE: Beck (1983) has described two relatively stable personality characteristics, which he termed autonomous and sociotropic personality modes. He developed a new scale to specifically measure both these personality modes, the Sociotropy and Autonomy Scales (SAS). This is a 60-item measure used extensively to analyse the personality modes – contained 30 autonomous questions (SAS-A) and 30 sociotropic questions (SAS-S). Factor analysis suggests that sociotropy consists of three sub-scales – Concern about Disapproval, Attachment, and pleasing others – and the autonomy scale also

consists of three subscales – Achievement, Freedom of Control and preference for Solitude. Each item is rated on a five-point scale, for 0-100. Therefore, for both the autonomous and sociotropic questions (SAS-A and SAS-S) the maximum score is 3000, the mean being 1500. The scale provides an indication of the frequency with which each statement can be individually applied. An example of an autonomous statement is “I can only rely on myself to get what I want”. An example of a sociotropic statement is “I need other people’s help in order to carry out my goals”.

The autonomous and sociotropic personality modes are measured as separate distributions, but they have the assertion that those who score highly on the autonomous questions (i.e. scores of 2000 or above – 2 or more standard deviations away from the mean) would have low scores for the sociotropic questions and vice versa. This is evident when the facets and statements pertaining to each of the personality modes are taken into consideration (see the statements above). In addition, it is hypothesised that fewer people would score at the extreme ends of either the autonomous or sociotropic personality modes and the majority of people would have a score of less than 2000 for both modes (i.e. less than 2 standard deviations away from the mean).

RELIABILITY & VALIDITY: The sociotropy and autonomy scales have an excellent internal consistency (Cronbach alphas of .90 & .88 respectively), and the subscales derived for each of the scales are internally consistent. The sociotropic and autonomy total scales had a significant but low negative correlation ($r = -.18$) indicating that the scales are largely independent.

The test-retest reliabilities were established by administering the SAS twice, the second 4- to 6- weeks after the first. The result showed good test-retest reliability (.75 – sociotropy and .69 – autonomy) – (Robins, 1985). Construct validity was indicated by a strong positive correlation between sociotropy scores and the “emotional reliance on another person” subscale of Hirschfield et al’s (1977) Interpersonal Dependency Inventory (IDI) - (IDI = .66, $p < 0.0001$) and between autonomy and the “assertion for autonomy” subscale on the IDI (.43, $p < 0.001$) – (Hammen, Ellicott, Gitlin & Jamison, 1989).

UTILISATION: The SAS has been used extensively with the general population by researchers such as Robins, Block & Peselow (1989); Ouimette, Klien, Anderson & Riso (1994) and Robins & Luten, (1991). It has also recently been successfully utilised with the older population by Mazure, Maciejewski, Jacobs and Bruce (2002) who investigated stressful life events and their interaction with personality styles and the resulting affective disorder(s).

This research project is attempt to validate this measure over a general population and therefore it was appropriate for this pilot study.

1.2.3 Procedure

The demographic information that was necessary for this study was attached to the SAS. They were then handed to the opportunistic sample to complete and return to the experimenter.

1.3 Statistical Analysis

The normal distribution of the population was analysed using the Kolmogorov-Smirnov Test of normality and confidence intervals

RESULTS

3.1 DESCRIPTIVE STATISTICS

In section 3.1.1: the demographic data and the total mean, median and standard deviation (SD) of the SAS for the non-clinical population (N=100) are summarised.

3.1.1: A summary of the demographic data for the participants in the non-clinical population (N = 100)

Table 1 below, summarises the demographic data pertaining to the Non-Clinical population. Within the sample, 58% of the participants were female. The age ranged from 18-84, with the average age being 45.42.

Table 1 Summary of demographic data pertaining to the non-clinical population (N=100)

Variable		Frequency
Age	18-25	19
	26-35	25
	36-45	18
	46-55	8
	56-65	10
	66-75	12
	76-85	7
Sex	Male	42
	Female	58
Marital Status	Married	44
	Single	29
	Widow	4
	Divorced	23
Employment	Employed	66
	Unemployed	9
	Retired	11
	Divorced	14

Table 2 below summarises the total mean, median and SD of the scores for the non-clinical population (N=100) on both the SAS-A and the SAS-S sub-scale.

Table 2: The mean, median and SD of the non-clinical population (N = 100) on the SAS-A and SAS-S.

Total scores (N = 100)	Mean	Median	SD
SAS-A	1469	1425	476.70
SAS-S	1484.70	1500	475.08

3.2 CAN THE SAS DISCRIMINATE PERSONALITY MODES?

In this section the first research question will be examined, with the following hypotheses:

2. The SAS will reflect the dimensional aspects of personality in a non-clinical UK population

As stated, the distribution of the population should resemble a normal distribution, if the population is to reflect the dimensional aspects of the SAS-A and SAS-S. Therefore, section 3.2.1 examines the distribution of total scores of the population (N=100). If this is the case, then the population can be split into three groups on the basis of their scores. In addition, for the population to be generalised, the expected mean (1500) would be predicted to fall within the confidence intervals of this population. Furthermore, when investigating these groups it was predicted by Beck (1983) that those in the SAS-AG would have low scores on the sociotropic scale, and vice versa. This will be explored in relation to this population in section 3.2.2.

3.2.1 Does the SAS reflect the dimensional aspects of personality in a non-clinical population?

Figure 1 and 2 shows the distribution for both the autonomous and sociotropic group, respectively. Table 3 shows the results of a Kolmogorov-Smirnov test of Distribution. These all indicate that the population is normally distributed on both the SAS-A and SAS-S. Furthermore, the confidence interval for the autonomous and sociotropic groups

are: 1401.20 – 1698.99 and 1414.30 – 1600.19, respectively. This indicates that this data is equivalent to that of the original clinical sample, and can be generalised.

Figure 1: Histogram showing the distribution of the Autonomous scores, for the Non-Clinical Population, on the SAS

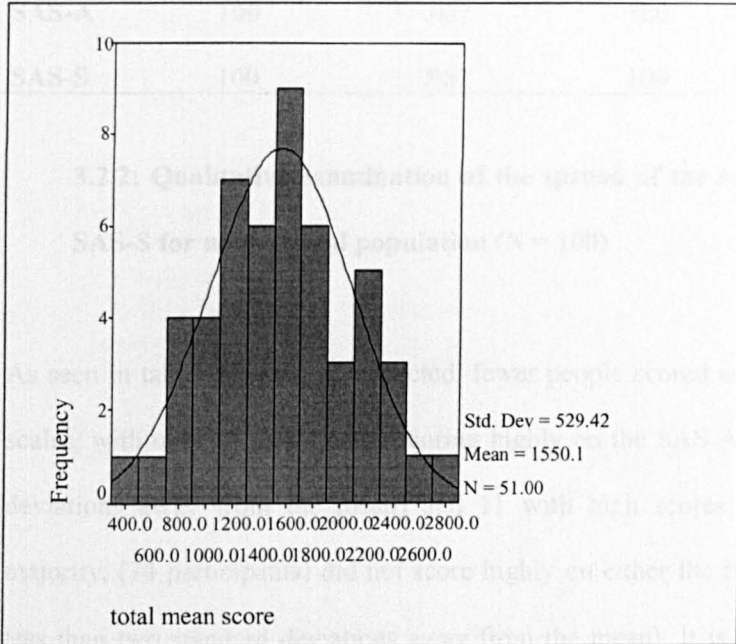


Figure 2: Histogram showing the distribution of the Sociotropic scores, for the Non-Clinical Population, on the SAS

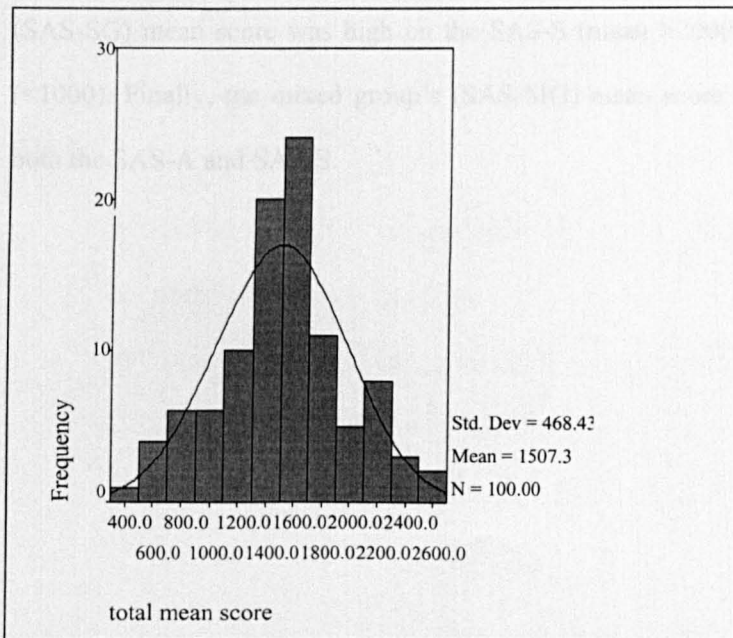


Table 3: Results of a Kolmogorov-Smirnov Test of Normality for the Non-Clinical population (N = 100).

Analysis	N	Statistics	D.F.	P
SAS-A	100	.087	100	.200
SAS-S	100	.082	100	.098

3.2.2: Qualitative examination of the spread of the scores on the SAS-A and SAS-S for non-clinical population (N = 100)

As seen in table 4 below, as expected, fewer people scored at the extreme ends of the scales, with only 15 participants scoring highly on the SAS-A (i.e. 2 or more standard deviations away from the mean) and 11 with high scores on the SAS-S. and the majority, (74 participants) did not score highly on either the SAS-A or the SAS-S (i.e. less than two standard deviations away from the mean). It is therefore possible to the population into three groups. The means for each group, on each set of questions, show that the autonomous group's (SAS-AG) means score was high on the SAS-A (mean >2000), and low for the SAS-S (mean <1000). In addition, the sociotropic group's (SAS-SG) mean score was high on the SAS-S (mean >2000) and low for the SAS-A (<1000). Finally, the mixed group's (SAS-MG) mean score was around the same for both the SAS-A and SAS-S.

Table 3: The spread of scores on the SAS-A and SAS-S for the non-clinical population

(N=100)

Total Mean for all Participants (N = 100)		
	SAS-A	SAS-S
SAS-A	1469	
SAS-S	1484.70	
SAS-AG (N = 15):	2333	857.14
Mean score		
SAS-SG (N = 11):	935.83	2258.33
Mean score		
SAS-MG (N = 74):	1492.57	1478.04
Mean score		

3.2.4 Summary of the results pertaining the pilot study:

The predictions were that the non-clinical and older adult population would reflect the dimensional aspects of the SAS in the follow: 1) The populations would be normally distributed, with the majority of participant scoring below two standard deviation away from the mean. 2) The expected mean (1500) would fall in the confidence intervals. 3) The population would separate into three groups, depending on whether the score was above or below two standard deviation away from the mean on the SAS-A and SAS-S. The results showed that:

- The SAS as a measure of personality appears to be normally distributed for the non-clinical population (N = 100)
- That the majority of participants fall, as predicted, less than two standard deviation away from the mean and that fewer participants would achieve score of 2 or more standard deviation away from the mean

- That confidence intervals for include the expected mean score from the SAS (i.e. 1500) and therefore this indicates that scores from both populations can be generalised.
- That the scores on the SAS can be used to differentiate three groups of personality modes i.e. the autonomous group (SAS-AG) (with a score two or more standard deviations away from the mean on the SAS-A) the sociotropic group (SAS-SG) (with a score two or more standard deviations away from the mean on the SAS-S) and the majority, mixed group (SAS-MG) (with a score less than two standard deviations away from the mean).

DISCUSSION

The primary purpose of the study was to investigate the properties of the SAS with a non-clinical sample, to discover whether the SAS is a valid measure to use. The study does offer some face validity for the SAS as a measure of personality modes in a non-clinical sample. The population is normally distributed; it was possible to identify people at the extreme ends of the dimensions, and the majority of the population scored below two standard deviations away from the mean and the expected mean did fall within the confidence intervals of the population.

The results are consistent with Beck's theoretical position (Beck, 1983, 1987), which predicted that there would be fewer people who scored at the more extreme ends of the dimensions, on either the SAS-A or the SAS-S. Also, this study confirms that those with autonomous personality modes low on the SAS-S and vice versa.

This study therefore suggests that the SAS can be used as a measure with a non-clinical population, as well as clinical populations.