

THE UNIVERSITY OF HULL

Beliefs and Behaviours for Preventing Occupational Health
Problems among the Second-hand Clothing Sellers in Southern
Thailand

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by

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Abstract

Aim

The overarching aims of this study were to explore what second hand clothing sellers understand about their occupational health risks and how they might minimise and prevent these risks and secondly to explore if this understanding influences to their preventive health behaviours.

Background

Previous work I noticed that the sellers were exposed to health risks from working processes such as dust from clothes, UV exposure and heavy lifting without using personal protective equipment such as mask, hat and sunglasses, although these health risks can be protected against by cheap materials and preventive health behaviours to deal with the health risks are not complicated. In the light of the problems as outlined earlier, it is necessary to investigate why these workers are exposed to health threats from a working environment without sufficient protection. It is vital to understand the threats by exploring the understandings of the workers of work exposures, their beliefs, and examine how such understandings may have a role in directions for any preventive health behaviours.

Theoretical framework

Health Belief Model (HBM) focusing on health beliefs including preventive health behaviour was adopted as a theoretical framework to guide the assimilation of existing evidence and to frame the qualitative ethnographic study.

Methodology and methods

Ethnographic research methods, underpinned by an interpretative paradigm, were applied to obtain rich, culturally embedded information. Participant observation along with note-taking and photographs as well as ethnographic interviews were contemporaneously conducted over a six months period in Yala province, a district

located in the southern border province of Thailand. Ethnographic data analysis based on the principle of HBM theory was utilised to analyse in-depth data from interview transcripts and sets this against a backdrop of detailed observation.

Result

The most significant findings of the present study are as follows:

- Cues to action which produce information and knowledge are the most important component influencing the other components of HBM according to findings from this market context.
- It seems that personal indirect experience is highly impactful for behaviour change and is most important for health promotion strategy for second-hand clothing sellers.
- Perceived barriers (especially discomfort for using personal protective equipment) was the most important component affecting negative working behaviours of second-hand clothing sellers.
- Limitations to access to information and context specific knowledge of second-hand clothing sellers is considered the most influential cause underpinning the occurrence of inadequate health beliefs and observations of negative work behaviour of second-hand clothing sellers.
- While the findings may not be surprising, they do add to further insight about the application of the HBM to this unregulated work context, and furthermore provide indicative directions for informing health promotion strategy that is tailored to the context of the market.

Conclusion

Promotion of knowledge and theoretically informed discussion of beliefs including self-efficacy are considered as indications for health promotion strategy for the sellers.

The research was presented by oral presentation in the 2nd Annual International Conference on Public Health, 2-5 May 2016, Athens, Greece.

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Chapter 1: Introduction and context of the study

1.1 Introduction

The purpose of this study was to explore the beliefs and behaviours of second-hand clothing sellers in Southern Thailand. Ethnographic methods were used to collect and analyse information about the health beliefs using the Health Belief Model (HBM) which consists of six components: perceived susceptibility, perceived severity, perceived benefit, perceived barrier, perceived self-efficacy and cues to action with regard to occupational health risk and risk prevention. Informants' health behaviours to prevent work-related health problems were clarified drawing on observations in the setting and interviews. The overarching aims of this study were to explore what second-hand clothing sellers understood about their occupational health risks and how they might minimise and prevent these risks and secondly to explore whether this understanding influences their preventive health behaviours. In this chapter, an overview of introduction and context of the study is provided. With regard to the context of the study, I describe the study background including my previous work as an advisor for occupational health to this community. The background information described in this chapter constitutes the rationale and justification for conducting the study. In addition, the local context of the study is presented and second-hand clothing sellers working processes are outlined.

The study is presented in eight chapters, including this first chapter; Introduction and Context. In the second chapter a review of the literature, justifying a decision to choose the HBM as the theoretical framework, is presented. Then, a series of studies regarding the introduction, historic origins and critique of HBM as the theoretical framework focusing on health beliefs including preventive health behaviour are reviewed. This includes an explanation of the literature review search strategy associated with my research questions. Finally, the analysis of literature on HBM and occupational health including the ethnographic methodology is presented and discussed.

The third chapter addresses the research methodology (theoretical) and then method (how I applied this in practice) as two different sections in the same chapter. Also,

ethical considerations and ethnographic analysis based on HBM are included.

The fourth chapter is focused on the findings concerning the research question “What are the second-hand clothing sellers’ beliefs regarding the occupational risks or risk prevention?” I focus on the second-hand clothing sellers’ beliefs which I describe with reference to the six key concepts of HBM.

In the fifth chapter, the findings are described to reveal answers to the research questions, “What are the preventive health behaviours of second-hand clothing sellers?” and “What is the relationship between second-hand clothing sellers’ beliefs and their preventive health behaviours? The findings of the study are presented with emphasis on the second-hand clothing sellers’ working behaviours, with a view to preventing health problems including accidents or injuries related to working conditions. I then clarify the relationship between second-hand clothing sellers’ beliefs, as described in chapter 4, to their preventive health behaviours.

The sixth chapter offers a description of future directions recommended for health promotion strategies for second-hand clothing sellers. The information presented is drawn from my research findings combined with the relevant literature. In order to make use of the findings for the future directions, recommendations with implications for health promotion strategy, promotion of knowledge and theoretically informed discussion of beliefs including self-efficacy are considered, alongside approaches to strengthening community action and recommendations to improve health service system in Thailand.

The seventh chapter demonstrates and discusses the major causes underlying the occurrence of insufficient beliefs which lead to negative work behaviour of second-hand clothing sellers. These are related to the future direction of health promotion strategy for these sectors. Further, the strengths, weaknesses and recommendation of the study are also discussed.

Lastly, in the eighth chapter I present the conclusion of the study, together with a discussion of the limitations of this study, implications of the study findings, and direction for future research. The implications and future directions of the present

study are categorised into two aspects; implications for policy and practice and implications for future research.

1.2 Setting the context for the study

I joined the Sirindhorn College of Public Health as a Nursing Instructor in April 2000. This was my first appointment after graduating a Bachelor of Science in Nursing. In 2011, I graduated with a Master of Nursing Science (Community Nurse Practitioner). I initially studied second-hand clothing sellers when I was studying for Master of Nursing Science (Community Nurse Practitioner). My previous study was development research aimed at developing a self-care manual to prevent and control the occupational risk at work for the second-hand clothing sellers.

My interest in second-hand clothing sellers formed as I had been a customer since 2004. Every time I went to the markets, I noticed that the sellers were exposed to health risks from working processes such as dust from clothes, UV exposure and heavy lifting without using personal protective equipment such as mask, hat and sunglasses, although these health risks can be protected by use of cheap materials and are not complicated. These observations raised me some questions, for example, do clothing-sellers have health problems from work exposure? What are the preventive health behaviours of the second-hand clothing sellers? Why do they work without personal protective equipment? How can their health be promoted? For this reason, I intended to investigate these questions further through a research degree in higher education.

When I had an opportunity to progress beyond the master's degree in 2009, I was keen to further investigate the subject of occupational health, one of the three research areas supported by the department of public health nursing, Prince of Songkla University, Thailand. At that time, I found that there was only one dissertation regarding occupational health in second-hand clothing sellers and no publication addressing this issue. Thongkoop (2009), my former senior classmate in my master's degree, who was the first researcher exploring health risks and health problems in second-hand clothing sellers, conducted a descriptive survey on the health problems and risk perceptions of work-related health problems among second-hand clothes sellers in Narathiwat

province, southern Thailand. The findings revealed that the workers are Muslim married males aged 20 to 34 years. They graduated from high school and had at least 5 years of work experience. Their risk perceptions were rather low and they were unable to access the government's health services. The samples were exposed to various kinds of health risks which led to several health problems, such as, respiratory and musculoskeletal problems. Other health problems, for instance, headache, dizziness and getting bored with the jobs can occur as well.

Studies involving people working in similar environments to the second-hand clothing sellers, for instance; textile-clothing sectors (exposed to dust from clothes), construction workers (heavy lifting), underground mine workers and home-makers (working in roles demanding awkward postures) have found that respiratory and/or musculoskeletal problems were the main health issues reported (Allwood, 2006; Boschman et al., 2012; Caldeira et al., 2006; Chaari et al., 2009; Jaen et al., 2006; Miranda et al., 2010; Thongkoop, 2009). Other problems such as skin, gastrointestinal, urinary, and eye problems as well as headache, dizziness and getting bored with the job were also found. There were caused by many factors such as working environments and work processes that increase the workers' exposure to the health threat, for instance, dust, sunlight, chemical substances etc. (Lu, 2011; Metgud et al., 2008; Paudyal et al., 2010; Soytaş, 2006; Wyon & Wargocki, 2013).

Moreover, from my previous observations, it was noted that many second-hand clothing sellers did not use personal protective equipment such as mask, hat and sunglasses, including working with wrong postures. I also found some barriers to their preventive health behaviour, especially lack of concern by health care providers. There is a lack of health officers having authority to take responsibility for or control many informal sectors in Thailand including second-hand clothing sellers. On May, 15, 2011, the Thai labour bill came into effect for those working in the informal sector or at home. However, this legislation does not cover all current workers, for example self-employed people are excluded. The welfare, allowance and health concerns of these sectors are still not sufficiently managed, especially for the second-hand clothing sellers due to most of the work being regarded as a family business. Most of them are work on their own as self-employed, and the number is increasing. Kongtip et al. (2015)'s study found that, Thai social security laws were unsuccessful in providing

informal workers with treatment for work-related health problems, accidents, and injuries; unemployment and retirement insurance; including workers' compensation.

In the light of the problems as outlined above, it is necessary to investigate why these workers are exposed to health threats from a working environment without sufficient protection, although the health threats can be protected against by cheap materials. It is vital to understand the threats by exploring the understandings of the workers of work exposures, their beliefs, and how the understanding influences their preventive health behaviours (Blumer, 1969; Boonphadh, 2008; Brewer, 2000). Also, a self-care manual is necessary for them as currently they do not have a health authority to take responsibility for them, or provide health services at the workplace. My research period was short: I had only two semesters for the whole process of my dissertation including data collection, data analysis and five chapters of writing up. For this reason, I decided to develop a self-care manual for second-hand clothing sellers due to spending less time on process compared with the investigation of health beliefs.

My master's study was undertaken to develop a self-care manual to prevent and control occupational risks for second-hand clothing sellers by making the manual easy to use. It could be read and followed by them as well as being portable, so being suitable for them because they had to move from one place to another. Moreover the manual was up to date, for there was no health authority from the government sectors to take care of them. The masters research consisted of four steps; 1) Interviewing and literature review 2) Drafting the manual 3) Trying out the drafted manual and 4) Evaluating and revising the manual. The study was informed by the Self Care Deficit Nursing Theory (SCDNT) (Orem, 2001) and the Work Improvement for Safe Home guideline (WISH) (Kawakami et al., 2006), a protocol was designed and created for better safety management control as well as more hygienic and working conditions especially for workers in the informal sectors who work at home.

The results from interviewing 12 second-hand clothing sellers questioned on health problems arising from work, any difficulties with health care and health needs along with the current situation found that almost all the sellers had musculoskeletal and respiratory problems. The causes of these problems were the working conditions, especially the processes of buying, selecting, and storing goods. Moreover when asked

about health needs, they called for the health authority to provide services for them in the workplace as well as a self-care manual or any kind of documents containing useful information that could promote safety at work directly to the workers. Consequently, they can practise healthy behaviour and by following the guidelines. Furthermore, it should be a guideline for the business owners or entrepreneurs to promote self-care for the second-hand clothing sellers in the same way.

After finishing evaluating and revising the self-care manual for second-hand clothing sellers, I still needed to further my study because some questions from my previous observation and the relevant studies, with regard to workers' beliefs and their preventive health behaviours still remained and should be investigated. Also, the relevant studies indicate that researchers will apply prevention programmes, including manuals to promote health for workers that target the multiple influences affecting safety from working conditions whenever they understand workers' perceptions of health risks influencing preventive health behaviour (Palis et al., 2006; Perry & Bloom, 1998). For these reasons, when I had the opportunity to study further for a PhD, I needed to explore the understanding of second-hand clothing sellers' beliefs about the occupational health risks and risk prevention, and, then, to examine how this understanding may or may not influence their preventive health behaviours.

This doctoral study was conducted in accordance with the principal missions of the college where I hold a nursing instructor position: conducting research based on local issues and developing new knowledge regarding public health nursing, aiming to cooperate and deal with local authorities in order to solve local health problems. In the beginning, it was considered that I was knowledgeable about second-hand clothing sellers as I live in the three southern border provinces of Thailand, one of the biggest areas for second-hand clothing markets, and I also used to be a customer. Nevertheless, I then realised there was little that I knew about the social context and community of second-hand clothing sellers. For this reason, deep and detailed knowledge of second-hand clothing sellers' lives is needed to understand their social context. The further study as presented in this thesis provides a greater consideration of the contextual issues of health behaviour in the market and aims to shed new understandings to inform health promotion policy.

1.3 Local context: the work processes of selling second hand clothes in the market

My previous observations in Sirithammaphan (2011), the study of Thongkoop (2009) and my observational data in the current study reveal that there are 10 steps in the second-hand clothes working process. The following details are presented as the local context of the study.

1.3.1 Buying goods from the wholesalers

The sellers travel by pick-up truck or motorcycle with sidecar to buy the packs of second-hand clothes contained in the sacks (as presented in figure 1) from the wholesalers or otherwise the workers can receive the goods from the wholesalers by delivery. The heavy goods, each cloth-sack weighing 100 kilogrammes, are moved or lifted by the workers themselves without any lifting equipment. Moreover, in order to buy cheap products, it is necessary for many sellers to drive long distances, approximately 50-150 kilometres, to the big wholesalers' storage in Yala, Pattani or Narathiwat provinces.



Figure1 Second-hand clothing goods (100 kg per sack)



Figure 2 Moving sack with incorrect posture

1.3.2 Grading and grouping the quality of clothes

The sellers start by cutting the wires wrapped around the clothing sacks (5-6 wires each sack). Each wire has a thickness of approximately 2-3 mm. The thick wires are strong and can be the cause of accidents or unintentional injuries while being cut. When the wires have been cut, the sellers open the clothing bales to sort out the unwashed clothes into three categories (i.e., grade A, B and C) depending on the size and condition. The quantity of clothes in each sack is approximately 500-1,000 pieces. Consequently, the sellers need to spend around 2-3 hours, sitting or standing to sort them out. Most sellers perform this process at night working in darkness which can affect their eyesight. Furthermore, they may inhale dust spreading from clothes when the clothing bales are opened.



Figure 3 Cutting the wire wrapped around the clothing sack



Figure 4 Second-hand clothes in the opened clothing bale



Figure 5 Separating clothes without using mask

1.3.3 Washing and drying clothes

Most second-hand clothing sellers in the southern part of Thailand do not routinely wash and dry clothes due to lack of time. Only a few of them do this to increase the quality and set a higher price for their goods. The process starts by grouping unwashed clothes by colour, for example, white and black clothes are separated before washing. The workers are still exposed to clothing dust by inhaling while they are grouping coloured clothes, and they may touch laundry bleach directly.



Figure 6 Touching laundry bleach directly while washing cloths



Figure 7 Incorrect position while hanging washed cloths

1.3.4 Ironing and putting clothes on hangers

As with washing and drying, a small number of second-hand clothing sellers iron and fold clothes. When the washed clothes are dried, the sellers then iron and put them on hangers. Then they put the goods in containers such as boxes. During the time of ironing and putting clothes on hangers, the sellers may sit or stand with incorrect position and for long periods of time.

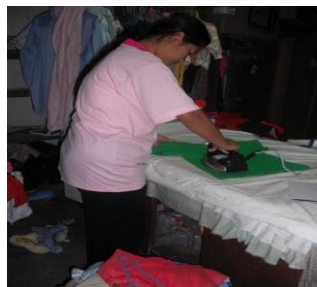


Figure 8 Prolonged standing while ironing

1.3.5 Travelling to the second-hand clothing markets

Most second-hand clothing sellers do not buy or rent commercial buildings. So, they need to sell goods in stalls at second-hand clothing markets where they can use market tents. The sellers start this process by lifting and moving goods and the equipment. Many of them have to make a long journey to sell clothes at the big markets.



Figure 9 Moving goods to the transport



Figure 10 Travelling by motorcycle with sidecar

1.3.6 Preparing the second-hand clothing stalls

After arriving at the markets, the sellers start to prepare their stall areas by moving goods including the equipment they need for selling from their vehicles to the stall

areas, installing tents and siting umbrellas on the ground. They may continue working with incorrect postures as shown in figure 11.



Figure 11 Siting market umbrella with incorrect posture

1.3.7 Preparing second-hand clothes for sale

The sellers prepare their merchandise by grouping different types of clothes, for instance, shirts, trousers and jeans, and also displaying their prices. The clothes are displayed by hanging on rails or piling on the floor. The more expensive goods are organised by hanging whereas the cheaper clothes are piled on the floors or tables. Sellers frequently bend down and look up while hanging. Incorrect postures also appear during the working process. In addition, they are also exposed to dust from unwashed clothes (most of them do not wash clothes) and surrounding dust.



Figure12 Standing on tiptoe while hanging clothes

1.3.8 Selling the second-hand clothes

Many sellers work every day for 8-10 hours per day (both day and night time) and also move around the weekly markets in the cities to which it is safe to go. A lot of customers arrive at the market around 11.00-13.00 a.m. and 16.00-20.00 p.m. because these are the times for lunch break and after work. This causes the sellers to have their meals late. They usually take a break before 11.00 a.m., and sometimes after 13.00 p.m. Due to the fact that the area for selling second hand clothes is a wide space without any buildings and toilets, they may wait for hours before using the toilet. This may cause problems with digestive and urinary systems (Thongkoop, 2009). Moreover, the sellers are exposed to health threats from the workplace environment in the markets as, for instance, dust in the air and insufficient ventilation, as well as bright sunlight.



Figure13 Lack of airflow in the workplace



Figure 14 Exposure to strong sunlight

1.3.9 Clearing up stalls

The sellers clear their goods and equipment, after the markets are closed by lifting, and placing them in the pick-up truck or a motorcycle sidecar. During this process, accidents can occur because some parts of these tools are sharp. Furthermore, the workers may be in contact with contaminated by clothing dust while clearing their stalls.



Figure 15 Clearing up the stall with incorrect posture

1.3.10 Leaving work

The sellers then travel home after finishing the clearing process. Many of them have long journeys.



Figure 16 The clothes and selling tool in the pick-up truck

The following diagram (figure 17) summarises the working processes of second-hand clothing sellers.

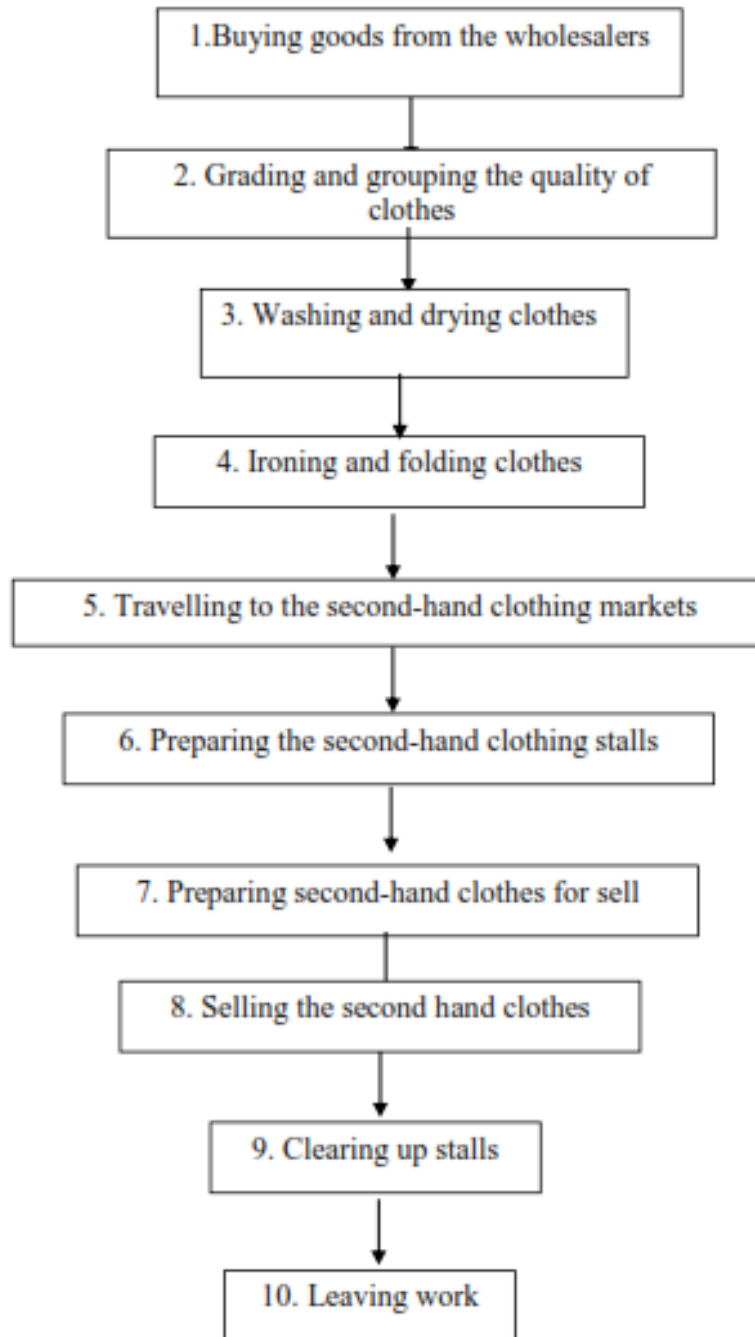


Figure 17 The ten steps of second-hand clothes working process

Figure 17 reveals that there are ten steps in a typical day's work for second-hand clothing sellers consisting of buying goods from the wholesalers, grading and grouping clothes by quality, washing and drying clothes, ironing and folding them, commuting to the second-hand clothes markets, preparing the stalls, preparing the clothes for sale, selling clothes, clearing up, and leaving work. There is no fixed rule as to which hours and days to work in the second-hand clothing markets. However, normally the number of working days and hours of second-hand clothing sellers depends on the number of markets in which they work, the frequency of their opening days, the number of customers and the weather (i.e., the markets are closed on rainy days).

My observational data from masters study indicates that second-hand clothing sellers are exposed to occupational health risks, such as dust from clothes, UV exposure and heavy lifting, in every step of their working process without using personal protective equipment such as mask, hat and sunglasses, although these health risks can be protected against by cheap materials, and preventive health behaviours to deal with the health risks are not complicated. Also, the previous relevant studies disclosed that the workers can be exposed to health risks because of a variety of health threats and may have several health issues, especially respiratory and musculoskeletal problems. The complexity of second-hand clothing sellers' context needs to be understood. For this reason, when attempting to prevent health problems, accidents and injuries, including promoting safety at work, understanding the context of second-hand clothing sellers and how this might influence their understandings about occupational health risks and taking actions is needed. Finally, all possible occupational health risks and other relevant factors influencing preventive health behaviours should be thoroughly investigated and addressed.

Chapter 2: Review of Literature

2.1 Introduction

From my previous studies and observation reported in the opening chapter, it was noticeable that many second-hand clothing sellers did not use personal protective equipment such as mask, hat, gloves and sunglasses. Nor did they pay attention to working with ergonomic postures. These are despite the fact that they could be exposed to occupational health risks in every step of their work. It seems crucial to this study to focus on the workers' beliefs and their preventive health behaviours, and also necessary to draw on existing theoretical work to inform the study. Consequently, in this chapter, a series of studies regarding the introduction, historic origins and critique of the HBM as the chosen theoretical frame and subsequent literature review associated with my research questions is clarified. Following this, an analysis of literature on HBM and occupational health including the ethnographic approach used is presented and discussed. In addition, suggestions of potential approaches to minimise work-related health problems and injuries based on previous studies are demonstrated.

2.2 The state of the knowledge about investigating health beliefs and behaviours

2.2.1 Literature review search strategy

In an effort to devise a rigorous study design, a review of the methodological literature on HBM written by the original researchers and other recognised experts in these areas was carried out. A search of the relevant literature was undertaken throughout the present study using the following electronic databases: Cumulative Index to Medical Literature Analysis and Retrieval System Online (MEDLINE), Nursing and Allied Health Literature (CINAHL), Academic search premier, PsycINFO including Multidisciplinary databases, such as, Scopus and Web of Science.

2.2.1.1 Applying PICO model as a method of search strategy

The PICO framework (Richardson, 1995), a method of search strategy which is applied to search for all possible combinations of search terms, was adopted for searching because PICO framework is seen as successful search strategy which is usually highly structured (Glanville et al., 2006). It also allows researchers to take a more evidence-based approach to searching literature from bibliographic databases like Medline (OVID), PubMed and so on. The acronym PICO stands for P=Population, I=Intervention, C=Comparison and O=Outcome. These four principal components of PICO are the necessary elements of the construction of the question for the bibliographic search of evidence and of the research question in evidence-based practice (Antes et al., 1999; Akobeng, 2005; Nobre et al., 2003; Sackett, 1997; Wyatt & Guly, 2002). The key words used to search the literature in the present study were underpinned by the PICO model as follows:

Research question 1: What are the second-hand clothing sellers' beliefs regarding the occupational risks or risk prevention?

Population: occupational sectors such as “second-hand clothing sellers” or “used cloth seller” or “seller” or “worker” or “sector” or “labo#r”

Intervention/indicator: “health belief model” or “HBM” or “health belief” or “belief” or “health perception” or “perception” or “risk perception” or “perceive* risk”

Comparison: -

Outcome: “occupation* risk” or “risk from work” or “occupation* impact” or “work effect” or “occupation* problems” and “illness” or “risk control” or “risk protect*” or “risk prevent*”

Research question 2: What are the preventive health behaviours of the second-hand clothing sellers?

Population: occupational sectors such as “second-hand clothing sellers” or “used cloth seller” or “seller” or “worker” or “sector” or “labo#r”

Intervention/indicator: -

Comparison: -

Outcome: “health behavio#r” or “risk behavio#r” or “risk prevent*” or “risk control” or “prevent* behavio#r” or “risk prevent* behavio#r” or “health prevent* behavio#r”

Research question 3: What is the relationship between the second-hand clothing sellers' beliefs and their preventive health behaviours?

Population: occupational sectors such as "second-hand clothing sellers" or "used cloth seller" or "seller" or "worker" or "sector" or "labo#r"

Intervention/indicator: "health belief model" or "HBM" or "health belief" or "belief" or "health perception" or "perception" or "risk perception" or "perceive* risk"

Comparison: -

Outcome: "risk behavio#r" or "health behavio#r" or "risk prevent*" or "risk control" or "prevent* behavio#r"

Research question 4: What are the implications for health promotion strategies for second-hand clothing sellers?

Population: occupational sectors such as "second-hand clothing sellers" or "used cloth seller" or "seller" or "worker" or "sector" or "labo#r"

Intervention/indicator: "impl*" or "implication"

Outcome: "promot* health" or "health promotion" or "health promotion strategy"

The keyword "Ethnography" was also adopted as it was chosen to be the research methodology. Then, the systematic review combined "ethnography" and "HBM" for the topic of "The application of HBM and ethnography". Some examples of searching with two keywords in this study are given below: "Ethnograph* and health belief model" or "Ethnograph* and HBM" or "Ethnograph* and health belief" or "Ethnograph* and percept*"

Electronic resources at a multi-campus university library were used to identify journals, articles and books. Particular note was taken of references that were frequently cited in bibliographies and appear to be classics. The search yielded the following: CINAHL 235 references, MEDLINE 471 references, PsycINFO 303 references, Scopus 273 references. However, many of the articles found were repeats, and after eliminating these, 112 articles were found by this method. The relevant literature in these articles were managed to create a bibliography in every section of this chapter as follows: Historic origins and development of HBM: 15 references; Literature review search strategy: 5 references; Analysis of literature on HBM and

occupational health: 96 references; HBM and qualitative study: 16 references; The integration of HBM and occupational health: 12 references; and Critique of HBM: 14 references. Some references chosen as inclusive criteria were found to be repeated in different sections, particularly references regarding the HBM. In addition, the inclusion and exclusion criteria mentioned above are clarified to understand how to include and exclude literature in this study as follows.

2.2.1.2 Inclusion and exclusion criteria

“Inclusion and exclusion criteria” underpin the conceptual framework of the review questions and determine what studies should be considered for inclusion or exclusion in the review to answer the overarching systematic review questions (Randolph, 2009). Thus, systematic review requires explicitly both inclusion and exclusion criteria to determine each potential primary study (Keele, 2007). Reasonably, those to be excluded from the review are listed in the exclusion criteria while the inclusion criteria specify which studies are to be included in the review along with justification for these decisions (Whittemore & Knafl, 2005). Moreover, both criteria define the studies in the review and therefore what the search strategy is attempting to locate. This is similar to the method by which authors of primary research define the respondents that they intend to investigate and draw conclusions about (Fejer et al., 2006).

In this study, **inclusion criteria consisted of:**

- 1) Nature of what is being studied – The topics or details of studies have the keywords specified by the research questions as mentioned above. Moreover, the resources, for instance, journals, articles, thesis, books and website are presented in full text.
- 2) Setting and population – a variety of workers, for instance, mine workers, weavers, nurses and so on (topic: HBM and occupational health; overview and result/ analysis of literature reviews), workers/samples having similar environments to that of second-hand clothing sellers, such as cloth and textile business sectors (dust from clothes), weavers (dust and working posture) and so on.

- 3) Date of research - The search was not limited in terms of year of publication due to the scarcity of literature related to the research area.
- 4) Research methods – ethnographic or qualitative study are considered (in the topics related to ethnography and HBM, qualitative study and HBM). Anyway, other methodologies, e.g., meta-analysis, RCT, cross-sectional study, descriptive survey, can be accepted in other topics where ethnographic or qualitative study are not relevant, for instance, the analysis of HBM and occupational health, the critique of HBM and so on.
- 5) Language of report - English language, Thai language because it is relevant to the context of study (the samples are Thai workers and the area of study is located in Thailand).

Exclusion criteria comprise:

- 1) Nature of what is being studied – The topics or details of studies are not relevant to the keywords mentioned above or the resources are presented in abstract.
- 2) Setting and population – the topics which are not relevant to the occupational health (in the topic: HBM and occupational health; overview and result/ analysis of literature reviews); workers/samples that do not have a similar environment to that of the second-hand clothing sellers (topic: perceived susceptibility of work exposure).
- 3) Date of research – no exclusion criteria
- 4) Research methods – other methodologies which have not included ethnography or qualitative study such as meta-analysis, RCT, cross-sectional study, descriptive survey in the topic of ethnography and HMB, qualitative study and HBMf
- 5) Language of report – other languages than English and Thai are excluded because of the risk of the misunderstanding from translations.

The process of literature review search strategy is presented in figure 18

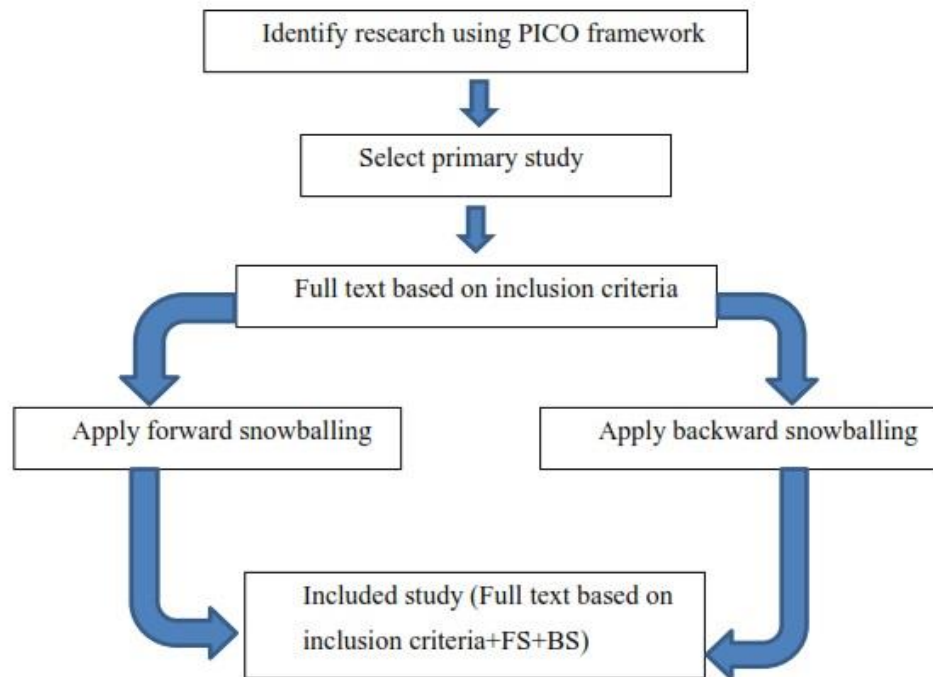


Figure 18 The process of literature review search strategy of the present study

A search strategy was started by creating a list of database-specific keywords and text words underpinned by the PICO model and the inclusion criteria. After the search is completed, the study titles and abstracts of the identified citations should be screened. The inclusion criteria can be checked on a sample of articles (Deville et al., 2002). Once the full text based on inclusion criteria was found, snowballing approach which refers to using the citations of a paper or reference lists to identify additional papers was applied on the identified papers by scanning the reference lists of all full text papers and using judgment to decide whether to pursue these further (Greenhalgh & Peacock, 2005; Mourão et al., 2017; Wohlin, 2014). This snowballing approach could be “Backward Snowballing (BS)” or “Forward Snowballing (FS)”. Backward snowballing (BS) refers to using the reference list of the identified papers, while forward snowballing (FS) means identifying new papers based on those papers citing the paper being examined (Mourão et al., 2017; Wahlin, 2016). Finally, although using an automated database search is better than manual search, its results may not satisfactory when the search area is wide or the searches include general terms (Kitchenham et al., 2009-2010; Skoglund & Runeson, 2009). Given the

challenges with the automated database search, we may miss important literature (Wohlin, 2014). Thus, other alternative approaches especially the use of a snowballing approach should be considered (Webster & Watson, 2002).

2.2.2 The link between HBM and occupational health/qualitative study

Because the present study uses HBM as the theoretical framework in the field of occupational health and qualitative study, the link between HBM and occupational health as well as HBM and qualitative study are outlined. There are twenty-five relevant studies categorised into two groups, the use of the HBM in occupational health literature and combining the HBM and qualitative methods. These studies are presented as tables 3 in section 2.5.1; The integration of HBM and occupational health and table 4 in section 2.7.1; The use of the HBM in qualitative methods.

There are various types of participants' occupations in the relevant studies including farmworkers/farmers (Arcury et al., 2002; Raksanam et al., 2012; Snipes et al., 2009; Suklim et al., 2014), workers working in a manufacturing plant (Kudo et al., 2011), health care workers such as nurses (Efstathiou et al., 2011; Janjua et al., 2010; Malaguti et al., 2008, Tabak et al., 2006; Yousafzai et al., 2013), miners (Patel et al., 2001) and baristas (Pursley & Saunders, 2016). The other participants were from the different ethnic/sub-ethnic groups in several countries consisting of the Uvwie (Asakitikpi, 2008), African-American women (James et al., 2012), Jamaican and Haitian Men (Kleier, 2004), members of Malick and Upper Malick communities (Smith, 2012), rural Canadians (Thomlinson et al., 2004) and Ghanaian (Wilkinson & Callister, 2010). Moreover, caretakers of children (Beer et al., 2012; Bond & Nolan, 2011), students (Downing-Matibag & Geisinger, 2009; Mehta et al., 2012) and patients being treated at the health services (Duran, 2011; Skiveren et al., 2010; Waite & Killian, 2008) were included in the relevant studies.

The all studies were conducted in fifteen countries: the United States of America (Arcury et al., 2002; Downing-Matibag & Geisinger, 2009; James et al., 2012; Kleier, 2004; Mehta et al., 2012; Patel et al., 2001; Pursley & Saunders, 2016; Snipes et al., 2009; Waite & Killian, 2008), Cyprus (Efstathiou et al., 2011), Japan (Kudo et al., 2011), Brazil (Malaguti et al., 2008), Thailand (Raksanam et al., 2012; Suklim et al.,

2014), Israel (Tabak et al., 2006), Pakistan (Janjua et al., 2010; Yousafzai et al., 2013), Nigeria (Asakitikpi, 2008), Tanzania (Beer et al., 2012), Australia (Bond & Nolan, 2011), Turkey (Duran, 2011), Denmark (Skiveren et al., 2010), Trinidad and Tobago (Smith, 2012), Canada (Thomlinson et al., 2004) and Ghana (Wilkinson & Callister, 2010). Various methods based on HBM were conducted to investigate the research questions. Almost all studies related to HBM and occupational health applied quantitative methods especially descriptive survey and cross-sectional study. While most studies regarding HBM and qualitative study applied focus groups (Efstathiou et al., 2011; James et al., 2012; Mehta et al., 2012; Patel et al., 2001; Smith, 2012; Waite & Killian, 2008) and ethnography (Asakitikpi, 2008; Kleier, 2004; Snipes et al., 2009; Thomlinson et al., 2004; Wilkinson & Callister, 2010) respectively as the research methods. Moreover, interviews/in-depth interviews (Beer et al., 2012; Bond & Nolan, 2011; Downing-Matibag & Geisinger, 2009; Skiveren et al., 2010) and case-study (Duran, 2011) were also included in the relevant studies. Remarkably, there are only two studies based on HBM and occupational health applying qualitative methods by using focus groups (Patel et al., 2001) and ethnography (Snipes et al., 2009).

The main strength, on the one hand, of the studies using HBM in the field of occupational health and specifically those using qualitative methods, concerns the insights that have emerged. The theory is effective in assessing an individual's health beliefs relating to health risks and preventive health behaviours, and decisions about whether to take action about a health concern (Beer et al., 2012; Bond & Nolan, 2011; Raksanam et al., 2012; Skiveren et al., 2010; Suklim et al., 2014; Thomlinson et al., 2004). Moreover HBM allowed researchers to use the themes generated from each theoretical construct to develop materials such as programmes (Downing-Matibag & Geisinger, 2009; James et al., 2012), therefore directly leading practice and contributing to impactful change.

On the other hand, the weaknesses of the studies are also indicated, as summarised in the tables. Most of the studies have used only some, not all, components of HBM to investigate the research questions regarding individual health beliefs relating to preventive health behaviours. For example, some studies did not mention perceived benefits, self-efficacy and/or cues to action in the results and discussions even though these are the main concepts of HBM used to investigate perception of health risk from

occupational exposure. However, there are no strict guidelines on how the major components of HBM combine to predict behaviours; HBM instead proposes that the individual independent variables are likely to contribute to the prediction of health behaviours (Orji et al., 2012). Using all the components of HBM in the studies is considered to better understand the process of changing behaviour to prevent disease (Beer et al., 2012; Bond & Nolan, 2011; Hazavehei et al., 2007; James et al., 2012; Smith, 2012). Moreover, some findings and discussions did not refer to the concept of HBM; the authors either just used it as a conceptual framework or did not mention the components of HBM in the findings and discussion which related to health belief.

2.2.3 Justifying the decision to apply HBM as the theoretical framework

Theories that focus on the individual's beliefs or perceptions and health behaviours are among the earliest theories of health-related behaviour to be developed and remain the most widely used today, consisting of Theory of Planned Behaviour (TPB) (Ajzen, 1988), the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), the Transtheoretical Model's (TTM) (Prochaska, 2013) and the Health Belief Model (HBM) (Becker et al., 1977; Janz & Becker, 1984; Rosenstock et al., 1960, 1974, 1988). Among the behavioural theories mentioned above, I have chosen HBM because it explains beliefs and preventive health behaviour that related to the research objectives of the present study.

According to the HBM, the model was developed to explain the widespread failure of people who were being charged little or nothing for the service to participate in health promotion programmes to prevent and detect disease (Hochbaum, 1958; Rosenstock, 1960, 1974). It is also used to understand why people did or did not take preventive measures, such as mask, engage in a wide variety of preventive health behaviours (Janz & Becker, 1984; Rosenstock, 1966, 1974). These can appropriately be applied with the present study because the objectives of the HBM are consistent with the objectives of the present study, i.e., to investigate why second-hand clothing sellers are exposed to health threats from their working environment without any sufficient protection, although protection against the health threats can be afforded by cheap materials leading to the aims of the study with regard to workers' beliefs and their preventive health behaviours.

Also, the other variables mentioned in HBM such as fear, threat, or past experience is related to the current situation of second-hand clothing sellers whereas TPB and TRA do not account for other variables that factor into behavioural intention and motivation. As well, TPB and TRA have not taken into account environmental or economic factors that may influence an intention of individual to perform positive behaviour (Boston University School of Public Health, 2013) while HBM reveals that the economic and/or environmental factors, such as clothing dust, influence a preferred course of action (e.g., a worker working in a hazardous environment) (Janz & Becker, 1984). Thus although a constructive use of TPB and TRA in public health research might well make a valuable contribution to understanding public health issues in relation to health inequalities and the roles that ethnicity or other environmental factors have in determining health-related behaviours and outcomes, neither the TPB nor the TRA are specifically structured for this purpose (Tayler et al., 2006). Apart from TRA and TPB, TTM is not appropriate to apply in the present study because this model may be especially useful in developing programme or intervention (Glanz et al., 2008).

Finally, the literature reviews illustrated that HBM is the only one theory specifically developed to describe preventive health behaviour (DeJoy, 1996) and, aside from some consideration of HBM constructs that closely fit the determinants identified for personal protective equipment (e.g., Cleveland, 1984; DeJoy, 1996; Terrell, 1984; Wall, 2009), HBM does highlight several constructs that should be relevant to workplace self-protective behaviour, consisting of threat-related beliefs (hazard susceptibility and severity), self-efficacy, response efficacy (perceived benefit), and barrier (DeJoy, 1996). What follows is an overview of the theoretical framework.

2.3 Introduction of the HBM

To enhance understanding of the HBM as the theoretical framework of the present study, introduction and background of HBM are required to clarify. The following details in this section include introduction of HBM and historic origins, development and classic and seminal works of the HBM.

2.3.1 Introduction

The HBM is a psychological and behavioural theory developed to predict and explain health-related behaviours, especially in regard to the uptake of health services (Janz & Becker, 1984). It is also a cognitively based model that does not consider the emotional component of behaviour (Champion & Skinner, 2008). Before applying the HBM as the theoretical framework of the present study, we should initially understand the origins and historical development of the theory. Consequently, the historic origins of the HBM are also outlined. Under this heading, I describe the origins and historical development of HBM, the primary purposes of the theory, and the people participating in theoretical development including the development of model constructions.

2.3.2 Historic origins, development and classic and seminal works of the HBM

The original version of HBM was developed initially as a systematic method in the early 1950s, at which time several social psychologists sought to understand the infrequent acceptance of preventive practices and pre-illness screening tests (Prentice-Dunn and Rogers, 1986). A group of social psychologists at the U.S. Public Health Service consisting of Hochbaum, Kegels and Rosenstock was the first group developing this theory to explain why people fail to participate in public health programmes such as the screening programme to prevent cervical cancer (Hochbaum, 1958; Janz et al., 2002; Rosenstock, 1960, 1974). The original goal of the HBM developers was to focus on understanding why people do not take personal protective equipment to prevent themselves from health threats (Orji et al., 2012; Rosenstock, 1966).

Hochbaum et al. (1952) who initially constructed and put the four major components, except cues to action and perceived self-efficacy, into the HBM structure concluded that the perceived health threat of individual is itself influenced by at least three factors: values of general health, which include concern and interest about personal health; beliefs about perceived susceptibility to a particular health risk; and beliefs about the impact or consequences of the health issue. Once individuals are susceptible to health threats and perceive the impact of the threats to their health. Also, they are simultaneously cued to action and their perception of benefits is higher than perception

of barriers, then that individuals are most likely to undertake recommended preventive health action. Likewise, there may be some variables (such as socio-psychological and demographic factors) that can influence a decision of the individuals.

Later, the model was proposed in the 1960 (Pender et al., 2006) as a framework for exploring why some people who are illness-free take action to avoid health problem whereas others fail to take preventive actions or why individuals fail to adopt a preventive health measure (Janz & Becker, 1984; Strecher & Rosenstock, 2002). In 1966, HBM was constructed to describe which beliefs should be targeted in communication campaigns to cause positive health action (Carpenter, 2010; Rosenstock, 1966) and theorists proffered the idea that emotional elements may have a greater impact on behaviour than cognition (Rosenstock, 1966). Rosenstock (1966) suggested that “a combination of behavioural evaluation variables and health threat could reach a considerable level of intensity without resulting in overt action unless an event occurs to trigger action in an individual”. Thus, a “cues to action” determinant was added to the model to describe a trigger to the decision-making process.

Despite this, the role that emotions and mental states play in determining individual behaviour does not appear to have been extensively explored by the theorists (Finfgeld et al., 2003). In 1971, an identified Jewish population in the area of Baltimore-Washington was invited to participate in screening programme for the Tay-Sachs trait (Becker et al., 1975, 1977). In 1974, the model was extended to explain people’s behaviours in response to their personal symptoms, a medical diagnosis, particularly adherence to medical regimens (Becker, 1974). Rosenstock (1974) also noted that the combined levels of perceived vulnerability and severity (i.e., perceived threats) provided the energy or force to act, while the perception of benefits (less barriers) provided a preferred path of action. After that, Becker et al. (1975) applied the HBM to the area of genetic screening.

Becker et al. (1977), studying selected psychosocial models and correlations of individual health-related behaviours, indicated that “the individual's subjective state of readiness to take action is determined by both the individual's perceived susceptibility and by the perceptions of severity”; while the individual's evaluation of the advocated health behaviour in terms of its efficaciousness and feasibility, weighed against his

perceptions of barriers involved in the proposed action. Finally, “cues to action” must occur to trigger the suitable health behaviour; this stimulus can be either internal cues (e.g., personal symptoms) or external cues (e.g., interpersonal information sharing, mass media communications).

In 1984, Janz and Becker provided a critical review of HBM investigations conducted since 1974 and combined these findings with earlier results to make an overall assessment of the model’s performance to date. They incorporated self-efficacy into the “barriers” component of the HBM and illustrated that a perceived barrier was the most productive, while perceived susceptibility was a close second. In 1986, Strecher and others explained that manipulations of self-efficacy have proven consistently powerful in initiating and maintaining change. The findings support Bandura’s assertion that efficacy expectations affect a person’s perception, rather than actual, capabilities, and that it is these perceptions and not one’s true abilities that often influence behaviour.

Later, perceived self-efficacy was added to the HBM constructs in 1988 by Rosenstock and others. This HBM construct is used to explain an individual’s belief about his or her capability to perform the recommended health behaviour in question. Rosenstock et al. (1988) compared Bandura’s social learning theory with the HBM framework and found that the two theories have much in common; not surprisingly, since both represent applications of theories regarding value expectancy. Locus of control would also appear to reflect the perception of benefits (in HBM) or outcome expectations (in Bandura’s social learning theory). Practitioners and researchers are recommended to extend using the HBM, but also to incorporate perception of self-efficacy. This is because each of the principal sources of perceived self-efficacy allows points for potentially-effective interventions directed at behavioural modifications. As well, Rosenstock et al. (1988) illustrated that an expanded HBM framework which incorporates perception of self-efficacy will provide a more powerful approach to comprehending and influencing health-related behaviour than has been available to date. Finally, HBM has six key concepts: perceived susceptibility, perceived severity perceived benefits, perceived barriers, perceived self-efficacy and cues to action.

2.3.3 Conclusion

In this section, I have described the historical origins and development of HBM, established initially in the early 1950s, and how it was developed, together with its developers, for instance, Irwine Rosenstock, Marshall Beaker and so on. The study showed how the HBM was started initially with five components, perceived susceptibility, severity, benefits, barriers and self-efficacy; and then, six main concepts of HBM were presented, due to the inclusion of self-efficacy in 1988.

2.4 The use of the HBM in occupational health literature

The principal missions of occupational health and safety is promoting workers' health, as well as reducing their possibilities of, or preventing the workers from, experiencing work-related health problems including accidents and injuries (De Oliveira Matias & Denis, 2002; Riedel et al., 2001; Rogers, 2003). In order to carry out this mission, the study of health beliefs regarding occupational health risk and preventive health behaviour is presented as the main focus of this study.

According to the HBM components and their links (figure 19), its six main constructs consist of perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action and self-efficacy (Champion & Skinner, 2008; Janz et al., 2002). In addition, other factors such as socio-psychological and diverse demographic factors may influence perceptions and, thus, indirectly influence preventive health behaviour. For instance, socio-demographic factors such as educational level are believed to have an indirect effect on individual behaviour by influencing the perception of susceptibility, severity, benefits, and barriers (Champion & Skinner, 2008). The HBM components and their links are shown in figure 19.

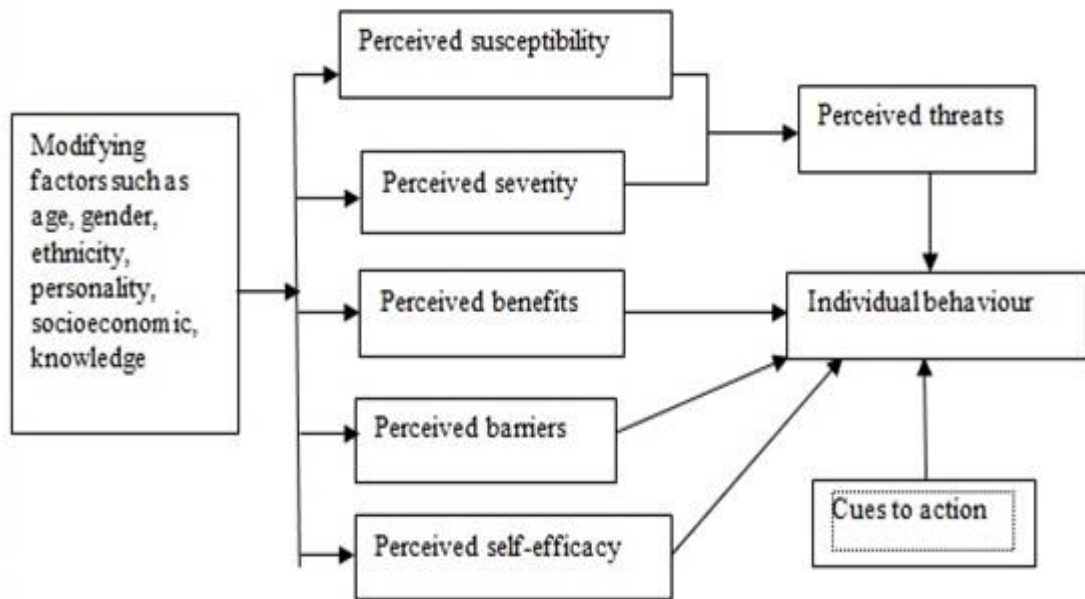


Figure 19 The HBM components and linkages (Champion & Skinner, 2008)

The application of HBM was started when the health risks from second-hand clothes working process had already been identified. The first step aims to investigate the second-hand clothing sellers' beliefs regarding the occupational risk and risk prevention. This step focuses on the six key concepts of HBM: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, perceived self-efficacy and cues to action. The next step aims to study workers' preventive health behaviours and then, identify the relations between the individuals' beliefs and their preventive health behaviours. The final step aims to study whether the main six constructs of HBM influence preventive health behaviours of the sellers or not. This application of HBM is shown in figure 20.

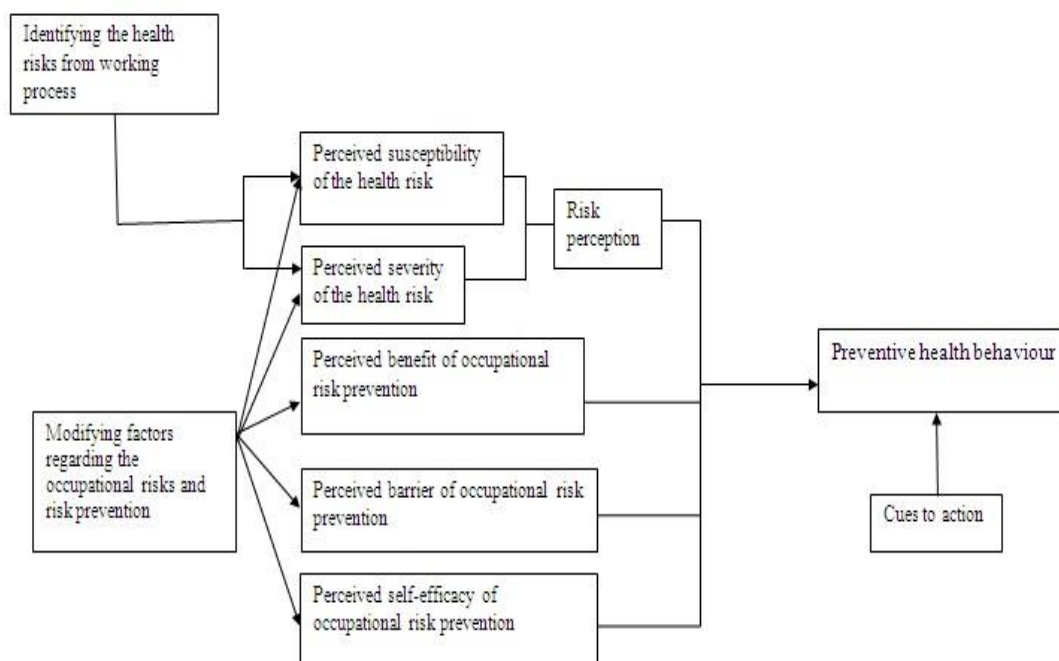


Figure 20 The application of HBM in the present study

2.4.1 Risk perception in occupational health

The relevant studies show that risk perception or perceived threats, as suggested by the HBM, is a key component in understanding how individuals become motivated to change their work behaviours (Arcury et al., 2002; Janjua et al., 2010; Raksanam et al., 2012; Suklim et al., 2014; Yousafzai et al., 2013). The risk perception is defined as the ideas that people have collected on risk sources associated to basic common sense and the information accessible (Jaeger et al., 2002). It is also initially interesting because it can be hypothesised to influence personal risk behaviour (Rundmo & Iversen, 2004). The literature reviewed shows that risk perception is computed by multiplying total score of each participant for perceived susceptibility and perceived severity (Akompab et al., 2013). The risk perception of individual workers exposed to occupational health risks is combined with the two components of HBM (i.e., perceived susceptibility and severity) as follows:

2.4.1.1 Perceived susceptibility or vulnerability of the health risk from work-related health problems/injuries

Perceived susceptibility or vulnerability refers to beliefs regarding the possibility or likelihood of getting a disease or health condition (Glanz et al., 2008). Individuals must perceive themselves to be susceptible to risk before they will take action (Arcury

et al., 2002). This dimension also refers to one's subjective perception of the risk of contracting a condition (Janz & Becker, 1984). The previous studies indicate that second-hand clothing sellers are susceptible to health problems/injuries in every step of their working process (Sirithammaphan, 2011; Thongkoop, 2009). These are relevant to the probability of work-related health problems/diseases among various kinds of workers exposed to similar environments to those of the second-hand clothing sellers, such as weavers (Nilwarangkul et al., 2004; Rajsri et al., 2013; Ritnamkum & Natapindhu, 2007) and workers working in the textile industries (Chaari et al., 2009; Kanagalakshmi, 2003; Metgud et al., 2008; Paudyal et al., 2010). The health risk from working conditions of these sectors were considered and reviewed because their working environment as well as health threats, for instance, cotton dust, cloth-dust, lack of ventilation and so on is similar to the workplace of second-hand clothing sellers. The other findings focusing on ergonomic postures, for example, underground mine workers lifting heavy weights of (Joy, 2004; Kunda, 2013), awkward posture in homemakers (Habib et al. 2012) and so on, are also considered. There are five major health problems identified from the literature reviews consisting of 1) respiratory problems 2) musculoskeletal problems 3) skin problems 4) eye problems and 5) accidents or injuries. These are discussed below.

First, respiratory problems. Many studies conclude that individuals working in the clothing and textile business sectors can be exposed to cotton dust and risk respiratory diseases, for example, allergic reaction, asthma and lung disease (Allwood, 2006; Caldeira et al., 2006; Chaari et al., 2009; Hinson et al., 2016; Jaen et al., 2006; Lai & Christiani, 2013; Minov et al., 2014; Nafees & Fatmi, 2016; Paudyal et al., 2010; Rajsri et al., 2013) in the same way as second-hand clothing sellers. The main causes of respiratory problems in the sectors are from inhaling dust from the atmosphere without using personal protective equipment (Chaari et al., 2009; Savolainen & Pursiaine, 2004; Thongkoop, 2009). In addition, the workers normally do the job at homes which mostly do not have sufficient ventilators. They could be affected by dust spreading around working areas and lack of air flow (Sirithammaphan, 2011; Thongkoop, 2009). Lack of ventilation resulted in house dust and indoor humidity are significant causes of respiratory diseases such as asthma and nonspecific hypersensitivities (Yang et al., 2012).

Second, musculoskeletal problems. The relevant studies reveal that one of the biggest health concerns for various types of workers is musculoskeletal diseases (MSD) (Habib et al., 2012; Sharma et al., 2003; Shipp et al., 2009; Treaster and Burr, 2004). Also, lifting heavy weights is one of the most common risk factors in musculoskeletal injuries (Jing et al., 2004; Kunda et al., 2013) and muscle pain (Sillapasuwana, 2001). Other faulty postures such as highly repetitive motion and prolonged sitting or standing in one position contribute workers facing musculoskeletal problems due to poor postures. Also, workers doing jobs with repetitive hand movements are endangered with upper extremity disorder as high levels of monotonous work are regularly engaged in repetitive motion, for example, hand movements, have more risk of upper extremity pain such as arm pain (Anderson et al., 2007; Gant et al., 2012; Habib et al., 2012) than those who perform such motions sometimes or never (Anderson et al., 2007; Habib et al., 2012). Repetitive work was also one of the factors affecting musculoskeletal injuries in findings in mine workers (Kunda et al., 2013). A fixed position, such as a prolonged standing posture while working, combined with repetitive arm and hand movement (Messing et al. 2008) gave workers postural pains such as neck and back pain (Metgut et al., 2008; Nag, 2007). Moreover, workers could have had musculoskeletal diseases or injuries because of their awkward postures (bending, twisting, kneeling or squatting), i.e., poor positions while sitting, standing, moving and lifting (Barrientos et al., 2010; Jing et al., 2004; Kunda et al. 2013; Ngan et al., 2010; Ritnamkum and Natapindhu, 2007; Schneider and Irastorza, 2010; Wood, 2005). Similar to those second-hand clothing sellers, health risk related to musculoskeletal problems from working conditions; for instance, lifting and moving heavy goods (e.g. each cloth sack, weighing 100 kilogrammes) without any lifting devices or with wrong positions while working may cause musculoskeletal issues such as back pain.

Third, skin problems. A few second-hand clothing sellers take the step of washing clothes before selling them. So they can be exposed to laundry bleach in this step (Sirithammaphan, 2011; Thongkoop, 2009). Ingredients such as silicates, phosphate, bleaches and surfactants can influence skin problems such as skin irritation, depending on the duration frequency and concentration of irritants) (Kiriya et al., 2003; Kwon et al., 2009). In addition, certain fragrance ingredients in washing-up liquids or fabric washing also may cause skin sensitisation (Api et al., 2008; Bajpai & Tyagi, 2007; Kirkup, 2011; Magnano et al., 2009; Yazar, 2011) and consumers or workers could

face repeated exposure leading to contact allergy if they use such products several times per day (Kiriya et al., 2003; Kwon et al., 2009; Yazar, 2011). Moreover, the sellers experience strong sunlight while they are selling clothes in daytime (Sirithammaphan, 2011; Thongkoop, 2009). Sunlight commonly affects the skin, ultra-violet (UV) radiation being an important cause of skin cancer (Besaratina & Pfeifer, 2008; D'Orazio et al., 2013; Halliday et al., 2008; Reinau et al., 2013; Sarchio et al., 2012; Sies & Stahl, 2004). In addition, UV radiation is also an important cause of other skin disorders, such as sunburn and photodamage (Sies and Stahl, 2004; Simpson, 2008).

Fourth, eye problems. Many second-hand clothing sellers are often exposed to sunlight because they usually sell clothes at day time markets with strong sunlight. The important optical threat from harmful light is ultra-violet (UV) rays from strong sunlight (especially from 10.00 a.m. to 2.00 p.m.) which can cause serious eye problems after ongoing exposure (Lehman, 2011; Newswire, 2012). Many studies have revealed a strong relation between higher exposure to ultra-violet radiation (UV rays) and pterygia (Maharshak and Avisar, 2009; Wlodarczyk et al., 2003). The other causes of eye problems in workers, such as relatively minor conjunctivitis, are from touching their eyes with contaminated fingers (Centres for Disease Control and Prevention, 2013). Moreover, the sellers often grade the clothes at night with low brightness. So, they may have any eye problems especially visual strain from possible causes such as inadequate lighting (Woods, 2005).

Last, accidents or injuries. This health risk can occur while commuting by transports such as pickups or motorcycle trailer in the steps of buying or selling goods. In addition, some parts of tools in use are sharp and can cause injuries, for example, when cutting wire wrapped around the sacks of clothes, touching hot irons, electrical short circuits and stabbing oneself with the point of an umbrella (Sirithammaphan, 2011; Thongkoop, 2009).

These are summarised in table 1: Summarises the susceptibility of second-hand clothing sellers to work-related health problems; consisting of the working process, major type of work, risk factors, body region/system most affected, and the major health problems. The table 1 is presented in the next page.

Working process	Major type of work	Risk factors	Body region/system most affected	The major health problems/diseases
1. Buying goods from the wholesaler	Moving and lifting Driving	Heavy lifting and incorrect position Accident	Musculoskeletal system Non specific	Musculoskeletal injuries, muscle pain Wound, fracture
2. Grading and grouping good quality	Cutting wire Grading clothes	Accident Dust, lack of ventilation Incorrect position (awkward posture, prolonged sitting or standing and repetitive work) Lack of brightness, using eyesight for a long time	Wrist, finger Respiratory system Musculoskeletal system Eyes	Wound Allergic reaction and lung disease Musculoskeletal injuries, muscle pain Visual strain
3. Washing and drying clothes	Grouping clothes Washing Hanging clothes	Dust Washing detergent Incorrect posture	Respiratory system Skin Musculoskeletal system	Allergic reaction and lung disease Skin irritation, contact allergy Musculoskeletal injuries, muscle pain
4. Ironing and folding clothes	Ironing and folding	Incorrect position (awkward posture, prolonged sitting or standing and repetitive work) Accident from touching iron Accident from electrical short circuit	Musculoskeletal system Skin Non specific	Musculoskeletal injuries, muscle pain Burn wound Electrical injuries

Table 1 Summarises the susceptibility of second-hand clothing sellers to work-related health problems

Working process	Major type of work	Risk factors	Body region/system most affected	The major health problems/diseases
5. Travelling to the markets	Moving and lifting	Heavy lifting and incorrect position	Musculoskeletal system	Musculoskeletal injuries, muscle pain
	Driving	Accident	Non specific	Wound, fracture
6. Preparing the second-hand clothing stalls	Lifting and moving	Heavy lifting and incorrect position	Musculoskeletal system	Musculoskeletal injuries, muscle pain
	Installing	Accident from stubbing with the point of an umbrella	Non specific	Wound
		Dust	Respiratory system	Allergic reaction and lung disease
7. Preparing second-hand clothes for sale	Hanging and moving clothes	Incorrect position (awkward posture and repetitive work)	Musculoskeletal system	Musculoskeletal injuries, muscle pain
		Dust	Respiratory system	Allergic reaction and lung disease
8. Selling the second hand clothes	Selling in the market	Dust, lack of ventilation	Respiratory system	Allergic reaction and lung disease
		Strong sunlight	Skin	Sunburn, skin irritation
		Incorrect position (prolong sitting or standing)	Eyes Musculoskeletal system	Visual strain, Pterygia Musculoskeletal injuries, muscle pain
9. Clearing up stalls	Lifting and moving	Incorrect position and heavy lifting	Musculoskeletal system	Musculoskeletal injuries, muscle pain
		Dust	Respiratory system	Allergic reaction and lung disease
10. Leaving work	Driving	Accident	Non specific	Wound, fracture

Table 1 Summarises the susceptibility of second-hand clothing sellers to work-related health problems (continued)

In conclusion, the review of literature shows that the second-hand clothing sellers are susceptible to the occupational risks as summarised in table 1. These are now described and organised as five major work-related health problems: respiratory, musculoskeletal, skin and eye problems, and accidents or injuries, in every step of their working process. The literature review here is focused on investigation and discussion of the second-hand clothing sellers' perceptions of occupational health risks, the first main component of HBM. In addition, I then explore and summarise this concept which could affect the workers' behaviour and advance my study to investigate the relationship between this concept and the preventive health behaviour of workers in chapter 5, topic 5.3 relationships between second-hand clothing sellers' beliefs and their preventive health behaviours, answering the third research question. The following section is about perceived severity of the health risk (i.e., the second and last component of risk perception).

2.4.1.2 Perceived severity of the health risk from work-related health problems/injuries

The severity or seriousness is one of the four original basic dimensions of HBM. It was mentioned as "Belief" in an illness causing pain (or of leaving it untreated) (Champion & Skinner, 2008; Janz & Becker, 1984; Rosenstock, 1966) or "Belief" regarding the seriousness of the consequences associated with the state or condition (Champion & Skinner, 2008; Tayler et al., 2006) or whether it was serious enough to warrant treatment (Gipson and King, 2013). This dimension includes assessments of both clinical and medical consequences (e.g., death, disability, and severe pain) and other possible social consequences, for instance, effects of the conditions on work (lost work time), family life, social relations (Champion & Skinner, 2008; Janz & Becker, 1984) including medical treatment (other than first aid) (Holder et al., 1999). The combination of susceptibility and severity has been labelled "perceived threat" (Champion & Skinner, 2008, Tayler et al., 2006). As shown in the preceding section, there are five major problem areas. Analysis of these follows.

First, respiratory problems: The major health problem in this system is allergic reactions such as asthma. A history of exposure to dust was a significant predictor of all respiratory symptoms as well as asthma (Bakke et al., 1991; Yang et al., 2012), a very

common chronic disease (Bousquet et al., 2005). The general symptoms of an asthmatic attack include: 1) Wheezing (i.e., a whistling sound caused by narrowed airways). 2) Dyspnoea, (i.e., shortness of breath). Use of the intercostal and accessory muscles for breathing may be more exaggerated than normal. 3) Coughing: in some patients, the first (or only) asthmatic symptom is a dry cough. Some patients have this cough even more distressing than sleep disturbances or wheezing. 4) Chest pain or tightness. Initial chest pain or tightness without any other symptoms may be an early indicator of a serious attack. 5) Rapid heart rate and sweating also may occur (University of Maryland Medical Center, 2013). In addition, death from asthmatic attack is a relatively uncommon occurrence. It is very rare for a patient who is receiving proper treatment to die of asthma (University of Maryland Medical Center, 2013). The economic cost of asthma is considerable both in terms of direct medical costs (e.g., the cost of hospital admissions and treatments) and indirect medical costs (e.g., time lost from work) (Bousquet et al., 2005).

Second, musculoskeletal problems: handling of heavy weights has long been acknowledged as being a major contributor to the high incidence of musculoskeletal injury or MSI (Hignett, 2003; Holder et al., 1999). The Workers' Compensation Board (WCB) of British Columbia defines MSI as: *“an injury or disorder of the muscles, tendons, ligaments, joints, nerves, blood vessels or related soft tissue including a sprain, strain and inflammation, that may be caused or aggravated by work”* (British Columbia. I.B.C. Government and Service Employees' Union, 2002). The prevalence of work-related musculoskeletal injuries reported by participants is highest in the low back and the upper back (Alrowayeh et al., 2010; Carroll et al., 2010; Hignett, 2003) including the arm, wrist and hand pain (Bradshaw et al., 2011; Coggon et al., 2013). Also, the most common type of injury reported is a muscle injury (Hägglund et al., 2013). Moreover, lifting, carrying, holding, pulling or pushing loads of material in awkward positions may cause lumbar disc herniation (Bern et al., 2013; Nimbarte et al., 2010).

Third, skin problems: The workers can be exposed to laundry bleach from washing clothes (Sirithammaphan, 2011; Thongkoop, 2009) and could have repeated exposure leading to contact allergy or skin irritation if they use such products several times per day, depending on their exposure conditions (concentration, duration, and frequency)

(Kiriya et al., 2003; Kwon et al., 2009; Yazar, 2011). Skin irritation, for example, irritant contact dermatitis, is often chronic; its aetiology frequently being related to occupational exposure to chemicals such as detergents (Jungbauer et al., 2004). Other skin problems include burns from touching hot metal, as in a heated iron and sunburn, a phenomenon related to exposure to UV radiation (Sies & Stahl, 2004) including skin cancer, both melanoma and non-melanoma (Leiter & Garbe, 2008). However, both forms of tumour show decreasing mortality rates worldwide (Leiter & Garbe, 2008),

Fourth, eye problems: The sellers are exposed to eye problems such as pterygium during the selling of goods, because pterygium has been shown to be caused by UV radiation (Abdulkabir et al., 2011; Maharshak & Avisar, 2009; Wlodarczyk et al., 2003). Even though advanced pterygium leading to bilateral blindness is unlikely to occur and even unexpected in a setting with eye care services available, blinding advanced pterygia with impact on quality of life is reported (Abdulkabir et al., 2011). Moreover, it has been reported that regular exposure to strong sunlight during occupational activities increases the risk of cataract formation (Neale et al., 2003; Saadat & Farvardin-Jahromi, 2006). The other causes of eye problems in workers, such as relatively minor conjunctivitis, are touching their eyes with contaminated fingers (Centres for Disease Control and Prevention, 2013) due to touching contaminated clothes while grading clothes and working in low brightness or inadequate lighting causing visual strain (Woods, 2005).

Last, accidents or injuries: this health risk can occur while travelling by vehicles such as pickups or motorcycle trailers while buying or selling goods, or using some tools parts of which are sharp and can cause injuries, for example when cutting wires wrapped around the sacks of clothes, touching irons and electrical short circuits and stabbing oneself with the point of an umbrella (Sirithammaphan, 2011; Thongkoop, 2009). The wound which can happen include iron burns from touching a heated iron and lacerations caused by sharp wires.

These are summarised in table 2: The severity of work-related health problems/injuries in second-hand clothing sellers; consisting of system most affected, the major health problems, risk factors, and severity or seriousness of the health problems. The table 2 is presented in the next page.

System most affected	The major health problems/diseases	Severity or seriousness							
		Death	Disability	Chronic disease	Pain	Uncomfortable/ sleep disturbance	Other possible social consequences		
							Hospital admission	Pharmaceuticals (medical treatment)	Time lost from work
Respiratory problems	Asthma	✓	-	✓	✓ Chest	✓	✓	✓	✓
	Other symptoms of allergic reaction such as sneezing, coughing	-	-	-	✓ Sore throat	✓	-	✓	✓
Musculoskeletal problems	Musculoskeletal injuries such as back pain, muscle pain, herniated disc	-	✓	-	✓	✓	-	✓	✓
Skin problems	Contact allergy or skin irritation	-	-	-	✓	✓	-	✓	✓
	Sunburn, skin cancer	✓ Skin cancer	-	✓	✓	✓	✓ Skin cancer	✓	✓
Eye problems	Pterygium	-	✓	-	✓	✓	✓	✓	✓
	Conjunctivitis	-	-	-	-	✓	-	✓	✓
	Visual strain	-	-	-	✓	✓	-	✓	✓
Accidents or injuries	Iron burn wound	-	-	-	✓	✓	-	✓	-
	Lacerated wound	-	-	-	✓	✓	-	✓	-
	Electric shock	✓	✓	-	✓	✓	✓	✓	✓
	Car/motorcycle accident	✓	✓	-	✓	✓	✓	✓	✓

Table 2 The severity of work-related health problems/injuries in second-hand clothing sellers

The findings of the studies discussed above reveal that the severity or seriousness of work-related health problems among second-hand clothing sellers links with the five major health problems of vulnerability to the health risk, and points to severe risks. The literature review reveals some insights that can be applied to understanding second-hand clothing sellers' beliefs about the perceived severity of the health risk, for instance, death, disability including other possible social consequences such as hospital admission and so on, from occupational exposure: "What are the second-hand clothing sellers' beliefs regarding the occupational risks?"

Furthermore, it is crucial to study perceived severity as it is the main component of risk perception (or perceived health threat) affecting preventive health behaviour as well as the susceptibility to the health risk, i.e., both perceived susceptibility and severity are the components of risk perception which can be hypothesised as influencing personal risk behaviour (Rundmo & Iversen, 2004). Consequently, this study will explore the links between two components (susceptibility and severity of the health risk) and how this plays into preventive health behaviours. Also, it will examine the influence of these components to preventive health behaviour of the workers as in the research questions: "What is the relationship between the second-hand clothing sellers' beliefs and their preventive health behaviours?"

2.4.2 The components of health expectation in HBM regarding the occupational risk prevention

The three components of HBM, perceived benefits, perceived barriers and perceived self-efficacy, are presented as the components of health expectations (Rosenstock et al., 1988). The details are as follows:

2.4.2.1 Perceived benefit of taking action on occupational risk prevention

Perceived benefit was defined in terms of personal evaluation as "subjectively understood positive benefits of taking a health action to offset a perceived threat" (Tayler et al., 2006). Even if an individual perceives vulnerability to a serious health condition, whether this perception leads to behaviour change will be influenced by the

individual's perceived benefits of the preventive health actions for reducing the disease threat (Champion & Skinner, 2008; Janz & Becker, 1984). Moreover, it was hypothesised that this depends upon beliefs regarding the effectiveness of the preventive health action. Thus, a "sufficiently-threatened" individual would not be expected to perform the recommended health action unless it was perceived as "feasible and efficacious" (Janz & Becker, 1984).

According to the literature reviewed, the advantages of risk prevention may be categorised into health care/public health benefits (Connor & Melissa, 2006; Lee et al., 2012) and individual benefits (Connor & Melissa, 2006; Fernández-Muñiz et al., 2009). First, on health care/public health benefits: a common unit of measurement of benefits from risk prevention was needed to have policy implications on the potential impact. Potentially, the valuation of the health care/public health benefits gained from public health programmes would include all the costs to society, including the cost of support health services, work-related costs, and medical costs (Lee et al., 2012).

Second, on individual benefits, the studies found that preventing occupational exposures could remove workers from exposure (Connor & Melissa, 2006) or reduce discomfort and risk of diseases or injuries (Feyer & Williamson, 2003; Lavoie, et al., 2005); for instance, musculoskeletal injuries (Lavoie, et al., 2005), disability from occupational low back pain (Frank et al., 1996), accident at the workplace (Awuste, 2008) and so on. These adverse effects are at least partially reversible after exposure to the hazardous substance or activity has stopped or after appropriate medical management has been instituted (Baker et al., 1989).

In conclusion, perceived benefit is one of the three components of health expectation affecting the preventive health behaviour. The workers should perceive the positive side of risk prevention if they prefer to avoid or remove themselves from occupational exposure. The literature reviews in this section can be adapted to investigate and discuss the second-hand clothing sellers' beliefs about the perceived benefits of prevention of risk from occupational exposure. After that the conclusion of further studies regarding the preventive health behaviours, or its absence, are clarified. And finally, an investigation of the relationship between this concept and the preventive health behaviour of workers is presented.

2.4.2.2 Perceived barriers to taking action on occupational risk prevention

Perceived barrier was defined as “the potential perceived negatively valued aspects of a particular action” (Janz & Becker, 1984). This factor has been identified as a key theoretical variable that blocks or discourages individual from engaging in a certain action in health behaviour research (Girma et al., 2017; Poston et al., 2013). Strecher and Rosenstock (1997) emphasised the essential of perceived barriers in understanding health behaviour change of individual as follows “*The component of perceived barriers was the most powerful single predictor among the HBM dimensions across all studies and behaviours*”. According to the HBM, perceived barriers to performing a health related behaviour must be low, while benefits must be high (Patel et al., 2001), and individuals must perceive that the health problem is significant before a health behaviour is adopted (Janz & Becker, 1984; Rosenstock, 1974). A literature reviewed appears to suggest that perceived barriers in HBM emerge as the strongest predictor to enacting health-related behaviours (Baxter et al., 2017; Patel et al., 2001). Wulfert and Wan (1995) also found the barrier dimension of the HBM to be more consistently associated with behaviour change than the two components of perceived threats (perceived susceptibility and severity).

In safety behaviour, perceived discomfort from using personal protective equipment such as wearing mask as well as lack of time and inconvenience of complying safety procedures seem to constitute a major part of the perceived barriers (Brown et al., 2000; Hersi et al., 2015; Sim et al., 2014). Moreover, a kind of cost-benefit analysis was thought to occur wherein the individual weighs the action’s effectiveness against perceptions that it may be expensive, or incur financial costs; dangerous (e.g., side effects, iatrogenic outcomes) (Janz & Becker, 1984; Rosenstock et al., 1988); unpleasant such as difficult; inconvenient, time-consuming, and so forth (Janz & Becker, 1984). There may also be personality characteristics and physical barriers (Rosenstock et al., 1988).

Patel et al. (2001), studying to understand barriers to preventive health actions for occupational noise-induced hearing loss, categorises the majority of the variables into two groups consisting of environmental barriers and individual barriers. Briefly, for

the one, the data suggest that environmental barriers are external realities that act as systemic constraints against behavioural change. Moreover, environmental barriers are pre-existing, uncontrollable realities that act as objective constraints against health-related behavioural change, for instance, economic (e.g., expensive or financial costs), medical concerns (e.g., protection causes headaches), technology (e.g., protection devices are too uncomfortable) and so on.

For the other group, individual barriers, for example, emotional experience (fear, isolation, frustration), are internally perceived cues that prevent engagement of healthy actions. These cues exist and are triggered only after the individual is present in the target environment because he or she is cognitively and emotionally internalising the environmental realities. Patel et al.'s (2001) example is "*I was always afraid that protection would isolate me from my team who depends on me*". There are also perceived subjective norms or perceptions that non-habitual use is the accepted norm, the example of which is "*Most guys on my crew don't wear 'em... at all... they never started young... because workers rely on each other. . . bosses never wear 'em... so the guys don't wear 'em*"

The findings presented in this section collectively show that perceived barrier is the most powerful single predictor among the HBM dimensions across all studies and behaviours (Strecher & Rosenstock, 1997). Workers probably view preventive health behaviours regarding the risk prevention in positive way if their perception of barrier is lower than perception of benefit. Furthermore, the study concludes that the possible barriers which can occur and influence workers' perceptions consist of environmental and individual barriers. The influence and relationship of this component towards the second-hand clothing sellers' preventive health behaviour will be clarified.

2.4.2.3 Perceived self-efficacy to take action on occupational risk prevention

The concept of self-efficacy is receiving increasing recognition as "a predictor of health behaviour change and maintenance" (Strecher et al., 1986). This concept has been added to the HBM on many occasions since the late 1970s, when "Bandura" first introduced the concept of "belief in one's ability to execute a given behaviour" (Bandura, 1977; Rosenstock et al., 1988; Strecher et al., 1986; Tayler et al., 2006).

According to HBM, constructs, as a set, are able to predict health preventive behaviour (Lin et al., 2005) and self-efficacy constructs are shown to be the most reliable predictors (Dobe, 1994; Lin et al., 2005). The concept of self-efficacy relates to beliefs about capabilities of performing specific behaviours in particular situations (Schunk et al., 1984; Strecher et al., 1986). Self-efficacy or the confidence in one's ability to take action (Champion & Skinner, 2008; ETR Associates, 2002; Rosenstock, 1974) has been incorporated into each of the value-expectancy models. Because most examples of self-protection in workers relate to the performance of a group of prescribed actions on a long-term basis, self-efficacy should be the important factor. Workers or labourers need to feel confident regarding their ability to perform required behaviours on a normal and long-term basis (Dejoy, 1996). Finally, the applications of self-efficacy are to provide how-to information, promote awareness and use appropriate reminder systems (Champion & Skinner, 2008). The findings of all these studies illustrate that individuals need to feel confident regarding their capabilities to perform required behaviour as occupational risk prevention influencing their preventive health behaviour. Consequently, I explore and summarise the perceived self-efficacy in the light of the literature from the relevant studies. These benefit to the findings related to the belief in their self-efficacy of second-hand clothing sellers.

2.4.3 Cues to action:

Cues to action is defined as “strategies to activate readiness” or readiness to change individual preventive health behaviour (Champion & Skinner, 2008; Gipson & King, 2012). It was also defined as, the individual reaching a decision about whether to engage in the behaviour, such as treatment linkage or adherence, taking everything into account. An individual also makes an appraisal about how capable (self-efficacious) s/he is to carry out the recommendations, given the barriers (Gipson & King, 2012). In addition, it was defined as “reminders or prompts to take actions consistent with an intention, ranging from advertising to personal communications from health professionals, family members and/or peers” (Tayler et al., 2006).

A cue to action must occur to trigger the appropriate health-related behaviour; this stimulus can be either internal, i.e. bodily events (e.g., personal symptoms such as

cough, back pain, skin irritation and so on) or external, i.e., environmental events (e.g., mass media, interpersonal information sharing such as advice from others) (Ali, 2002; Becker et al., 1977; Janz & Becker, 1984). Indeed, although the concept of cues to action is appealing, cues to action is difficult to study in explanatory surveys due to a complexity (Champion & Skinner, 2008). Moreover, even though it is assumed that diverse demographic, personal, structural, and social factors can, in any given instance, affect health motivations and perceptions of an individual, these variables are not considered as direct causes of health action (Becker et al., 1977). Finally, Rosenstock et al. (1974) noted that the cues to action is the most underdeveloped and rarely measured or researched element of the model (Rosenstock, 1974). While the cues to action may be important, it is not examined in the current review, as there are not enough studies that measured it.

The review of literature concludes that cues to action, one of the six main concepts of the HBM, is defined as “the strategies to activate readiness or readiness to change their preventive health behaviour”. These cues can be “internal” or “external” which must occur to trigger the appropriate health behaviour. Consequently, after exploring workers’ preventive health behaviour (the second research question), I will explore and summarise whether the cues to action affect the workers’ behaviour.

2.4.4 Modifying factors related to the individual beliefs or risk perceptions on occupational health risk and risk prevention

According to the HBM, modifying factors include knowledge and socio-demographic factors that may influence health perceptions and, thus, indirectly influence health-related behaviour (Champion & Skinner, 2008). A review of the literature surrounding occupational exposure among various types of workers focused on modifying factors associated with health beliefs. The samples exposed to health risk from occupational exposure, including accident or injury, were considered, in particular, the agricultural sector (Khan, 2010; Martinez et al., 2004; Raksanam et al., 2012). The modifying factors related to health beliefs regarding work-related health problems/injuries were described as follows:

2.4.4.1 Age:

Age is the factor related directly to development and maturity levels of each individual. Older people have more life experience than younger people and past experiences affect personal adaptation, assisting more problem-solving and accurate perception (Kumarjan, 2000). Health risks from work fluctuate with personal age, i.e., workers having more experiences probably have more ability to perceive health problems and perception of risk from work than workers having less experience (Barrientos et al., 2010; Kanagalakshmi, 2003). Moreover, the findings reviewed reveal that age was found to be positively correlated with risk perception of hazards (Akompab et al., 2013; Khan, 2010; Lindell & Hwang, 2008).

2.4.4.2 Gender:

Gender or sex is the personal factor often found to be a crucial determinant of risk perception (Shepherd et al. 2011). Differences between male and female physical and mental characteristics may stretch to differences in their behaviour (Thongkoop, 2009) including affective reactions (Rundmo & Iversen, 2004). This findings illustrate that gender is a significant factor related to risk perceptions regarding the occupational exposure (Chan et al., 2009) including risk perception of environmental hazards, and females have significantly higher perception of risk than males (Shepherd et al., 2011). However, other findings show that male workers may have higher perception of risk because they are in occupations involving obvious risks, for instance, truck drivers, port workers and so on, jobs usually filled by males (Cezar-Vaz et al., 2012). According to Kessler et al. (1981), they found that women more often labelled feelings of distress as emotional problems than men did and, also, men seek mental health services less often than women even when experiencing similar emotional problems.

2.4.4.3 Income:

Income is expected to have a positive impact on risk perception and health protective behaviour, for the reason that high income individuals are more likely better aware and better informed and can afford protective measures (Khan, 2010). Similarly, Root

(2009) revealed that income is associated significantly with women's perceptions of their work identities and work-related risks.

2.4.4.4 Educational level:

Educational level is relevant to occupational perceptions: that is, workers with little formal education might be at higher risk when they are exposed to health threats, for instance when using pesticides, because of difficulties in understanding the instructions and safety procedures included on the product labels (Raksanam et al., 2012). Consequently, the more educated people are expected to perceive risk more accurately and subsequently adopt health protective behaviour because of this (Khan, 2010). Similarly, Perilla et al. (1998) illustrated that adolescents with low education are rarely aware of concepts such as disease prevention and health precautions. Furthermore, Champion and Skinner (2008) mentioned that "socio-demographic factors, particularly educational attainment, are believed to have an indirect effect on behaviour by influencing the perception of susceptibility, severity, benefits, and barriers" (Champion & Skinner, 2008).

2.4.4.5 Knowledge:

The connection between knowledge and the workers' health beliefs is important because the knowledge and belief of workers can have either a positive or a negative impact on their own safety or that of their crews (Martinez et al., 2004). Arcury et al. (2002) concluded that greater pesticide exposure knowledge was strongly related to higher perceived pesticide risk (PPR) scores of farmers (Arcury et al., 2002). Similarly, Melissa et al. (2000) illustrated that knowledge levels were positively related to beliefs, intentions and self-efficacy regarding use of personal protective gear of workers.

The literature shows the links between modifying factors including age, gender, income, educational level and knowledge and the health beliefs or risk perception of workers very well. However, this is not the main focus of the present study, rather the contextual issues underlying behaviour is the key focus of the present study.

2.4.5 Preventive health behaviours to prevent work-related health problems of the second-hand clothing sellers

Five major health problems are identified from the literature reviews consisting of 1) respiratory problems, 2) musculoskeletal problems, 3) skin problems, 4) eye problems and 5) accidents or injuries. Consequently, this section focuses on occupational risk prevention to prevent the five major health problems which can occur in the second-hand clothing process. There are 11 studies regarding the principle of occupational risk prevention and control in various kinds of workers which have working conditions similar to those of the second-hand clothing sellers (Barrientos et al., 2010; Gentner & Slavin, 2010; Kawakami et al., 2006; McStay, 2010; Metgud et al., 2008; Occupational health and safety office, 2002; Rengasamy et al., 2010; Sirithammaphan, 2011; Schneider & Irastorza, 2010; The National Institute of Occupational Safety and Health, 2010; World Health Organization, 2002).

In order to prevent and control occupational health risk of workers, the straightforward approach to solve the occupational health threat is to examine the issue in term of its three fundamental elements, source, path and receiver (Bauer et al.2001; Lally & Barrett, 1999; Solet & Barach, 2012). The source means the source of workers exposure, while receiver means workers who are exposed to health risk (Bauer et al., 2001). Path is the means or route by which a source of contamination can migrate; an identified receptor can be exposed to, or be affected by an identified source. Consequently, path is the distance between source and receiver (worker) (LaMontagne et al., 2003, 2005; Wasserman, 1994). Consequently, the principle of occupational risk prevention and control for second-hand clothing sellers are described based on the three fundamental elements, source, path and receiver. The results found the following about that preventive health behaviour to prevent and control the occupational health risk:

2.4.5.1 Preventive health behaviour to prevent respiratory problems

1) Using enclosing materials, such as bags, boxes etc., for containing clothes when grading and grouping them. These materials have advantages not only as

convenient or easy way to categorise clothes but also to protect workers from dust while grading and grouping. (Figure 21)

2) Opening windows and grading unwashed clothes near it and, as well, using fans to create draught for improving ventilation. Increasing ventilation is useful for reducing the accumulation of dust and can protect the workers from allergic rhinitis (figures 22 and 24).

3) Using masks as personal protective equipment to prevent inhalation of dust from clothes and the environment. Workers can anyway adapt clothes or fabrics to wear as masks (Ramirez, 2015; Rengasamy et al., 2010) as presented in figure 23.



Figure 21 Using bags to contain clothes when grading and grouping them



Figure 22 using fans to create draught for improving ventilation



Figure 23 Adapting a scarf as a mask



Figure 24 Comparing insufficient and sufficient ventilation of the workplace

2.4.5.2 Preventive health behaviour to prevent musculoskeletal problems

1) Clearing the pathway for transfer of sacks of clothes not only to make it easier to move the sacks but also to prevent accidents when moving them (Figure 25).

2) Using tools for lifting or transfer of sacks of clothes, for example, trolleys, lifts and so on (Figure 26).

3) Using proper lifting techniques: squat to lift and lower (do not bend at the waist); keep the lower back bowed in while bending over; keep weights as close to the lifter as possible; bow their backs in and raise up with their heads first; if they must turn, turn with their feet, not their body; never jerk or twist; put weights down by

keeping the lower back bowed in and keeping their feet apart, staggered if possible. (Figure 27-28).

4) The individual's back should be straight and the elbows positioned at right angles (90°) while working (Figure 29).

5) Heavy weight lifting should be limited, for women, to 25 kilogrammes and for men to 55 kilogrammes.

6) Sitting on chairs appropriate to the height of the goods while grading or grouping clothes (Figure 29).

7) Trying to change position and avoid prolonged sitting or standing.

8) Having areas at least 3 square metres per worker for grading or grouping clothes.

9) Avoiding awkward postures (bending, twisting, kneeling or squatting). (Figure 30-31).



Figure 25 Comparing wrong and right pathways



Figure 26 Trolley and lifting equipment



Figure 27 Comparing wrong and right ways to move sacks of clothes



Figure 28 Comparing incorrect and correct postures for lifting sacks of clothes



Figure 29 Adjusting sitting positions with right angles (90 °) of elbows



Figure 30 Comparing incorrect and correct postures for hanging clothes



Figure 31 Comparing incorrect and correct postures for picking up tools

2.4.5.3 Preventive health behaviour to prevent skin problems

- 1) Washing hands before and after contacting clothes.
- 2) Avoiding sun exposure during peak hours, between 10 a.m. and 3 p.m., and not over 2 hours to prevent sunburn and other skin reactions
- 3) Using personal protective equipment for sun protection consisting of hats, wearing long sleeved shirts and long trousers or skirts whenever workers are exposed to strong sunlight (Hyatt et al., 2010; Kobayashi, 2005; Safety & Council; Turner & Parisi, 2013) (Figure 32).

4) Using personal protective equipment such as gloves to prevent contamination by laundry bleach (Magnano et al., 2009) and preparing water for cleaning areas which are contaminated by laundry chemicals (Sirithammaphan, 2011) (Figure 33).

5) Using sunscreen approximately 15 minutes before exposure to the sun, SPF 25-30 for white people and SPF 15 for others and repeating every 2 hours while still exposed to sunlight (Turner & Parisi, 2013).



Figure 32 Comparing wrong and right preventive health behaviour



Figure 33 Using gloves and preparing some water nearby

2.4.5.4 Preventive health behaviour to prevent eye problems

1) Using personal protective equipment such as sunglasses when exposed to strong sunlight or motorcycle helmet shield (when driving) to prevent eye problems from strong sunlight (Figure 34)

2) Working in areas with sufficient brightness, in particular, grading and grouping clothes outdoors during the day time, if the indoors has insufficient brightness. If they grade the clothes at night, the light bulb must have enough brightness. (Figure 35)

3) Resting eyes for approximately 15 minutes every 2 hours while staring at clothes (in the step of grading and grouping clothes)



Figure 34 Using sunglasses or motorcycle helmet shield when driving



Figure 35 Working in areas reached by sufficient brightness

2.4.5.5 Preventive health behaviour to prevent accidents or injuries

1) Preventing accidents or injuries from sharp materials

1.1) Using suitable equipment to cut wires such as wire-cutters, and separating sharp wires in containers such as boxes away from the pathway

1.2) Using personal protective equipment such as gloves when cutting the wires wrapped around the sacks of clothes, or touching sharp materials (Figure 36)

1.3) Dividing pick-up trucks into lockable compartments for tools, and sharp materials like umbrellas (Figure 37)



Figure 36 Using gloves to maintain market umbrellas



Figure 37 Example of separating sharp materials such as umbrellas

2) Preventing accidents or injuries from transport

2.1) Wearing helmet or using seatbelt during travelling to work

2.2) Load limits: weight, not over 2,500 kilogrammes for pick-up and 500 kilogrammes for motorcycle trailer; height, not over 3 metres for pick-up truck

2.3) Using canvas to cover the goods in the pick-up truck, not only to avoid wetting from rain but also to prevent containers such as sacks or bags being dropped from the truck and causing accidents (Figure 38)



Figure 38 Using canvas to cover the pick-up truck

3) Preventing accidents or injuries from electrical short circuits

3.1) Checking and maintaining electrical equipment

3.2) Wearing shoes and drying hands before touching electrical equipment such as irons

In conclusion, the principles of risk prevention in occupational health and safety are qualified by the various working conditions or occupational exposures, for instance, exposure to dust, lifting of heavy weights, exposure to sunlight etc. This section provides the fundamental guidelines of occupational risk prevention for second-hand clothing sellers to evaluate their preventive health behaviour. Also, I then examine the preventive health behaviours caused by their health beliefs or otherwise (as in the second research question). Finally, the relationship between the two constructs, preventive health behaviour and health belief, is considered.

2.5 Health Belief Model (HBM) in occupational health: overview and result

Because this study uses HBM as the theoretical framework in the field of occupational health and safety by studying second-hand clothing sellers as the workers, the link between HBM and occupational health is outlined. This section aims to describe HBM and its results combined in the field of occupational health in order to understand how these are adopted or combined. The contents in this section provide the objectives of this combination through the relevant literature reviews. Also, the conclusion of these

literature reviews gives the overview and results to provide the knowledge which can be applied in this study. As a consequence, this section provides an analysis of HBM constructs as it is the theoretical framework regarding beliefs and preventive health behaviour.

2.5.1 The integration of health belief model (HBM) and occupational health

The HBM was often used in the research area of occupational health because it has constructs that closely fit the identified determinants for the use of personal protective equipment (Cleveland, 1984; DeJoy, 1996; Terrell, 1984; Wall, 2009). It was particularly noteworthy that factors identified with the use of personal protective equipment closely matched the construct of HBM (Wall, 2009). Only 12 studies regarding integration of the principle of the HBM and occupational health were found (Arcury et al., 2002; Efstathiou et al., 2011; Janjua et al., 2010; Kudo et al., 2011; Malaguti et al., 2008; Patel et al., 2001; Pursley & Saunders, 2016; Raksanam et al., 2012; Snipes et al., 2009; Suklim et al., 2014; Tabak et al., 2006; Yousafzai et al., 2013). In order to integrate the use of HBM in the area of occupational health, the 12 relevant studies are summarised and critiqued in Table 3. Data extraction for included papers comprised: author, topic, methodology, population/sample and summary. A quality appraisal was completed for each paper was a consideration of applicaton to the present study. Details are presented in Table 3.

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
1	Arcury et al., 2002	Pesticide Safety among Farmworkers: Perceived Risk and Perceived Control as Factors Reflecting Environmental Justice	Cross-sectional study using structured interview and using descriptive statistic for data analysis	293 farmworkers in eastern North Carolina	Participants' levels of risk perception from using pesticides and perceived control of pesticide safety were moderately high. Understanding about pesticide safety from information could reduce perception of risk and increase individual perceived control. However, perceived risk was not associated with safety behaviour and had a limited relationship to safety knowledge. Moreover, perceived control was strongly related to safety knowledge and safety behaviour but was not related to individual knowledge about pesticide exposure	<p>Strength: Using HBM as a framework is particularly useful to understand the risk perception and safety behaviours of workers as this study could apply the concept of perceived threats in HBM to investigate perceived risk of farmworkers. Also, HBM can be combined with other frameworks to answer the research questions.</p> <p>Weakness: The study illustrated only the 2 key concepts of HBM (perceived susceptibility and self-efficacy) and factors associated with these components. Studying only two main concepts of HBM is inadequate to develop an environmental education programme as the other components of HBM which this study did not mention: i.e. perceived severity, benefits and barriers; are also associated with pesticide safety behaviour of the farm workers.</p>	To consider HBM in occupational health

Table 3 The use of the HBM in occupational health literature

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
2	Efstathiou et al., 2011	Factors influencing nurses' compliance with Standard Precautions in order to avoid occupational exposure to microorganisms: A focus group study	Using focus group discussion to investigate the compliance with standard precautions of nurses	32 nurses working in the two largest public general hospitals in Cyprus	<p>Perceived susceptibility: Nurses are susceptible to developing diseases from contacting microorganisms.</p> <p>Perceived severity: The severity of diseases may be serious</p> <p>Perceived benefits: The participants can protect themselves from diseases by implementing the requirements of Standard Precautions.</p> <p>Perceived barriers: The participants mentioned several barriers such as: Emergency situation, availability of equipment and time limitation.</p> <p>Perceived self-efficacy: It is difficult for the participants to change their work behaviour, although they perceive that it is not correct.</p> <p>Cues to action: The participants stated that "provision of care to adults" was considered as the main cue influencing them to use Standard Precautions.</p>	<p>Strength: 1) Through a focus group, participants can discuss and share their common aspects, ideas and experiences. 2) The HBM is appropriate to apply in this study as it has been successful in explaining various types of human behaviour, their attitudes, and compliance with Universal Precautions.</p>	To consider HBM in occupational health and as a qualitative study

Table 3 The use of the HBM in occupational health literature (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
3	Janjua et al., 2010	Sharps injuries and their determinants among health care workers at first-level care facilities in Sindh Province, Pakistan	Cross-sectional study to identify the incident of sharps injuries and the factors associated with the injuries	233 health care providers	During the previous 6 months, fifty-four per cent of the 233 workers had at least one injury. Also, risk perception, work experience and the different types of health care worker were significantly associated with receiving sharps injuries. Moreover, a higher score of knowledge was associated with less number of sharps injuries.	<p>Strength: 1) Using HBM as a framework is particularly useful to understand risk perception and preventive health action; 2) Cross-sectional study could explain the linkage between variables such as risk perception, work experience and type of health care worker and the occurrences of sharp injuries.</p> <p>Weakness: The study only focused on the components of risk perception, perceived susceptibility and severity. It did not mention the other four main concepts of HBM. Thus, it is difficult to conclude that these perceptions may influence positive or negative behaviour to prevent sharps injuries.</p>	To apply in the topics about risk perception influencing work-related health problems

Table 3 The use of the HBM in occupational health literature (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
4	Kudo et al. (2011)	A Lifestyle to Prevent or Combat the Metabolic Syndrome among Japanese Workers	Cross-sectional study (using questionnaires) Data were analysed using multiple linear regression Analysis	The study samples were 2,287 workers working in a manufacturing plant in Japan.	The results showed that age was positively associated with a lifestyle to prevent or combat the metabolic syndrome. The workers with a family physician or workers who were informed about diseases by health care providers had more appropriate lifestyles than did those without one. Moreover, the findings pointed out that the health issue is a life-threatening disease, thus the study suggested practical ways to prevent or combat this syndrome.	Strength: 1) In the field of behavioural sciences, the concepts of the HBM combined with the Multidimensional Health Locus of Control (MHLC) are useful tools to conduct the crucial education to affect the expected results; 2) Cross-sectional study could explain the linkage between variables such as age, information from health providers, and lifestyle to prevent metabolic syndrome accurately. Weakness: 1) Because researchers did not employ the random sampling method, the generalizability of their findings was limited. 2) Although cross-sectional study could explain the linkage between variables and lifestyle to prevent metabolic syndrome, it is difficult to interpret associations identified; for example why information from health care providers is associated with a lifestyle to prevent the health problem.	HBM could be combined with other theories used in the field of occupational health, such as Health Locus of Control to explain and predict preventive health behaviour

Table 3 The use of the HBM in occupational health literature (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
5	Malaguti et al. (2008)	Nurses in leading positions and measures to prevent occupational exposure: facilities and barriers	<p>Descriptive study, performed at a large school hospital in a city of the State of São Paulo, Brazil</p> <p>Data were collected through semi-structured scripts with open and closed-ended questions. The data extracted from the multiple-choice questions were analysed quantitatively and displayed in tables, percentages, averages and intervals, while the qualitative answers were analysed descriptively and categorized through content analysis.</p>	126 nurses in a university hospital who had leading positions, lead-nurses and nurses in charge	<p>The result shows that the major difficulties endured by leading nurses to prevent accidents from work among nursing workers are associated with the lack of compliance of other professionals in the nursing team to the measures established by the SP.</p> <p>Nearly all the study informants were aware that they were susceptible to contracting some diseases or pathogens, and stated that the pathogen infection may cause health issues such as the development of chronic diseases. Also, risk of developing diseases may be the cause of death.</p>	<p>Strength: Using HBM dimensions and occupational health exposure as a framework is particularly useful for the study of nurses' perception of susceptibility, severity and barriers as well as preventing occupational exposure because of its simplicity and parsimony.</p> <p>Weakness: The study only focused on the components of HBM especially perception of barriers and impair or impede prevention of occupational accident of leading nurses. It did not illustrate the linkage between the components of HBM and positive behaviour and also, this study did not focus on perceived benefit to compare with perceived barriers .</p>	HBM is particularly useful to investigate the workers' perception and how they impair or impede prevention of occupational accident/injury.

Table 3 The use of the HBM in occupational health literature (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
6	Patel et al., 2001	Understanding Barriers to Preventive Health Actions for Occupational Noise-Induced HearingLoss	The Qualitative study: Focus Groups	32 miners volunteered from 2 mines participated in the focus group sessions.	The results show that perceived barriers have to be eliminated first, before other major components of HBM can be addressed in a campaign. This is because perceived barriers tend to prevent workers from engaging in health action or even considering the use of personal protective equipment.	<p>Strength: 1) Focus group as qualitative study allowed researchers to gather large amounts of in-depth information on the research construct that could not be gathered otherwise with quantitative study. 2) Using HBM as a framework is particularly useful to understand barriers to preventive health action.</p> <p>Weakness: 1) The findings from this focus group should not be overly generalised to all occupational environments. 2) The focus group limits the ability of researchers to draw more conclusions through certain types of analysis because each focus group session contains only a brief discussion on barriers specifically.</p>	The result of Patel et al. illustrated that the barriers could be categorised into two groups, internal and external barriers This result can be applied for data analysis in this study

Table 3 The use of the HBM in occupational health literature (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
7	Pursley & Saunders, 2016	Knowledge, attitudes, behaviors, and noise exposure of baristas	Descriptive survey using questionnaires(s tructured interviews) as a research instrument based on HBM	There were fifteen baristas recruited from six different cafés in the area of Portland metro	Dosimetry measurements showed that participants are not exposed to sound levels above the regulatory criterion. The data from questionnaires indicated that the workers' awareness regarding the hazards of noise was low. Also, they are not opposed to hearing conservation, and rarely work with hearing protective equipment to protect them from noise exposure when engaged in noisy activities.	<p>Strength: Using personal dosimetry as a tool to measure the daily sound pressure levels is affective and accurate</p> <p>Weakness: 1) According to the aims of the study, to investigate knowledge, attitude and behaviour is associated with the theory of planned behaviour rather than HBM. 2) Using questionnaires to measure personal risk behaviours might not accurately reflect the actual work behaviours of the workers. 3) Data were collected from a small sample of cafés and baristas, consequently the data may not be representative of the 'typical café'</p>	The relationship between risk perception and knowledge as modifying factor and preventive health behaviour.

Table 3 The use of the HBM in occupational health literature (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
8	Raksanam et al. (2012)	Health Risk Behaviors Associated With Agrochemical Exposure Among Rice Farmers in a Rural Community, Thailand	Mixed method, using questionnaires for quantitative study and using community-based ethnography (included focus group discussions, interviews, and observation) in the part of qualitative study	101 rice farmers living in the Khlong Seven community, Thailand.	The average level of health beliefs including perceived susceptibility and severity of health hazard from agrochemical exposure, perceived barriers and benefits of agrochemical safety among farmers was moderate. Moreover, the main risk factors associated with agrochemical exposure resulted from the misuse of pesticides, including the use of faulty spraying equipment, misunderstanding about pesticide toxicity, the lack of proper maintenance of spraying equipment and the lack of protective gear and inappropriate clothing.	<p>Strength: 1) HBM is appropriate to the study as it is used to evaluate health beliefs of farmers and their protective behaviours to prevent agrochemical exposure. 2) Using mixed-method is effective as it offsets the weakness of both qualitative and quantitative study. 3) The community-based ethnography encourages equal and active partnership between academic investigators and community members</p> <p>Weakness: Using questionnaires to measure personal risk behaviours might not accurately reflex the actual behaviours of the participants.</p>	HBM could be applied in the study to evaluate participants' beliefs and make decisions that influence their preventive health behaviour within the context.

Table 3 The use of the HBM in occupational health literature (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
9	Snipes et al., 2009	Pesticides protect the fruit, but not the people	Using community-based ethnography and public health risk assessment to investigate farmworkers' health beliefs about pesticide exposure risks. Also, observation and interviews along with fieldnotes were used to gather data on farmworkers' pesticide exposure risks	99 farmworkers living in the Lower Yakima Valley of Washington State	The results could be categorised into five main themes: (1) participants often perceived dry pesticides as a "harmless powder", (2) participants who have allergic reactions to pesticides are more vulnerable to pesticide exposure, (3) those who perceived themselves as physically weak have more severe impact from pesticide exposure, (4) personal protective equipment is needed in response to expenditure to work rapidly, and (5) some participants delay decontamination because of a lack of appropriate temperature of water for hand-washing.	Strength: 1) The principal researcher and team lived in the study region during all phases of data collection for a long period of time (around 1 year) to ensure proper use of ethnographic methods. 2) The interview transcripts and detailed field notes were reviewed by the principal researcher in their entirety and debriefing summaries. Weakness: Qualitative method is limited in that the results cannot be generalised and they typically involve small samples.	The principle of HBM was combined with ethnographic methodology to implement and develop a strategy for assessing risk perception associated with pesticide exposure of the workers. These enable me to understand about the contexts of perceived threats or risk perception among workers.

Table 3 The use of the HBM in occupational health literature (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
1 0	Suklim et al. (2014)	Risk behaviours-related agrochemical use among rubber farmers in Southern of Thailand	Cross-sectional study using questionnaires on knowledge, health beliefs, and behaviours about pesticide risk use, as well as a focus-group discussion guidelines.	316 rubber farmers from the 8 villages of Khogyang, Trang, Thailand were recruited.	1) There was positive significant correlation between knowledge and behaviour scores. 2) Statistically significant predictive variables associated agrochemical use behaviour were knowledge on agrochemical use and belief agrochemical use. These predictors accounted for 39.80 per cents of variance. 3) All predictors were positively related to agrochemical use behaviour.	Strength: 1) The HBM is effective in assessing an individual's perceived susceptibility, severity, benefits, barriers, self-efficacy and cues to action as they relate to decisions about whether to take action about a health concern. 2) Using quantitative study can explore the level of beliefs and the linkage between the components of beliefs and risk behaviours accurately. 3) The linkages also included each and all component(s) of health belief; perceived susceptibility, severity, benefit and barriers, and risk behaviours of rubber farmers Weakness: 1) Although using cross-sectional study can explore the level of famers' beliefs as well as the linkage between beliefs and risk behaviours, the study did not explain deeply and precisely the relationship between beliefs and behaviours. 2) There is only one variable regarding modifying factor in this study (knowledge). There are several potential modifying factors associated with risk behaviours; for example, working experience, socio-psychological variables.	The study attempted to apply the HBM to explore farmers' beliefs and behaviour regarding pesticide use and to evaluate the relationship between health beliefs and risk behaviour.

Table 3 The use of the HBM in occupational health literature (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
1 1	Tabak et al., 2006	The health beliefs of hospital staff and the reporting of needlestick injury	Using descriptive survey to examine relationship between the health beliefs of staff working in hospital and the failure to report needlestick injury	240 staff from eight randomly chosen departments of the Western Galilee Hospital (in northern Israel)	Nurses had a highest rate for exposing to needlestick injury, followed by auxiliary staff and doctors. The auxiliary staff illustrated the highest rate of compliance with their duty to report the incident of injuries, followed by nurses and doctors. Perceived seriousness of disease from the injuries and the perceived self-efficacy of reporting injuries including overall motivation to maintain health were the best predictors of reporting compliance. Moreover, time-limitation was one of the important barriers of reporting of needlestick injury.	<p>Strength:</p> <ol style="list-style-type: none"> 1) Using HBM as a theoretical framework is appropriate to examine the linkage between the health beliefs of the workers and their behaviour to report the incident of injuries. 2) Using quantitative study can explore the level of beliefs and the linkage between the components of beliefs and risk behaviours accurately. 3) The study reveals the complexity of unsuccessful report of the injury. <p>Weakness:</p> <ol style="list-style-type: none"> 1) One of the limitations of the study is that the study was conducted in only one hospital. 2) Certain problems were not reported in this study, for instance, how much time does it take to report a needlestick injury? 3) The study did not explain deeply and precisely the relationship between beliefs and behaviours. 	Using HBM to examine the linkage between health beliefs and behaviour to prevent disease/injury

Table 3 The use of the HBM in occupational health literature (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
1 2	Yousafzai et al., 2013	HBM to Predict Sharps Injuries Among Health Care Workers at First Level Care Facilities in Rural Pakistan	Using cross sectional study to assess the predictors and frequency of sharps injuries	485 health care workers in rural Pakistan	Work experience, barriers in practicing the universal precautions (such as lack of personal protective equipment, and proper training), compliance with universal precautions, knowledge about bloodborne pathogens' transmission, and risk perception were associated with the occurrence of sharps injury. Also, the knowledge of bloodborne pathogens' transmission, long- standing experience for being in the job and perceiving lower barriers to safe practice predicts use of universal precaution in turn resulting in less sharps injuries.	Strength: Using HBM as a theoretical framework is appropriate to predict sharps injuries as it attempts to explain and predict individual health behaviours. Weakness: Although using cross- sectional study can explore the level of workers' beliefs as well as the linkage between beliefs and risk behaviours, the study did not explain deeply and precisely the relationship between beliefs and behaviours	Using HBM to examine the linkage between health beliefs and behaviour to prevent disease/injury

Table 3 The use of the HBM in occupational health literature (continued)

Most studies reveal that HBM was used to study occupational health beliefs and preventive health behaviours (Efstathiou et al., 2011; Malaguti et al., 2008; Patel et al., 2001; Raksanam et al., 2012; Snipes et al., 2009; Suklim et al., 2014; Tabak et al., 2006; Yousafzai et al., 2013) and to explain and predict health preventive behaviour (Janjua et al., 2010; Kudo et al., 2011). Others study perceived risk and perceived control as factors reflecting environmental justice (Arcury et al., 2002) and the prediction of occupational injury (Yousafzai et al., 2013). The research objectives are relevant to occupational exposure/injury/disease; for example, agricultural exposure to such chemicals as pesticides (Arcury et al., 2002; Raksanam et al., 2012; Snipes et al., 2009; Suklim et al., 2014), occupational diseases such as metabolic syndrome (Kudo et al., 2011), or infections transmitted such as from sharp or needlestick injuries (Efstathiou et al., 2011; Malaguti et al., 2008; Tabak et al., 2006; Yousafzai et al., 2012). Arcury et al. (2002) mentioned that HBM is particularly useful for the study of workers' safety behaviour because of "its simplicity and economy". It sees behaviour as a function of an individual's subjective value of an outcome and his or her expectation that a particular health behaviour will result in that outcome.

The relevant studies mentioned above show that HBM is still applied in many studies regarding occupational health. Although most studies using HBM and occupational health have used quantitative study methods such as questionnaires and there is only limited qualitative work, except for Efstathiou et al. (2011), Patel et al. (2001) and Snipes et al. (2009), qualitative research allows researchers to gather larger amounts of in-depth information. This is because this method intends to encourage informants to freely express and exchange their feelings, ideas, and experiences on the studied subject. These lead to a more in-depth study of a subject (Efstathiou et al., 2011; Patel et al., 2001; Snipes et al., 2009).

In conclusion, HBM is appropriate to adopt in the present study and particularly to study the health beliefs and health behaviour of second-hand clothing sellers as the objective of the study. Consequently, building on the existing literature, it seems appropriate to adopt concepts from HBM to guide investigation of second-hand clothing sellers' beliefs and their preventive health behaviour.

2.6 Critique of the HBM

2.6.1 The ability of the HBM to predict behaviour across different health behaviours

Several studies related to the ability of the HBM to predict behaviour across different health-related behaviours have been published (Carpenter, 2010; Harrison et al., 1992; Zimmerman & Vernberg, 1994). The Janz and Becker review conclude that susceptibility, barriers, and benefits were good predictors of behaviour whereas severity was not (Carpenter, 2010). The relevant literature found that the HBM was predictive of behaviour, but only weakly so in comparison to social cognitive theory and especially as compared to the TRA (Zimmerman & Vernberg, 1994). The reviews examined the ability of the model as a whole to predict behaviour but the estimates of the effect of each variable on behaviour were all fairly small (Harrison et al., 1992; Zimmerman & Vernberg, 1994). The variation in the included variables obscures the ability of the original and most often researched core HBM variables to predict behaviour (Zimmerman & Vernberg, 1994). Failure to correct for these variables weakens estimates of the size of the effects (Hunter & Schmidt, 2004).

2.6.2 The strengths and weaknesses of HBM

As with other theories, the HBM has some recognised strengths and weaknesses as follows.

2.6.2.1 The strengths of HBM

The strength of the HBM theory is its use of simplified health-related constructs that make it uncomplicated to implement, apply, or test (Conner, 2010). A common direction in research using HBM as a theoretical framework is to determine its profitability in combination with other frameworks or models. For example, the principle components of HBM have been combined with the components of TTM (Champion & Skinner, 2008), or The Multidimensional Health Locus of Control (Kudo et al., 2011). It has been used effectively to deal with public health issues, such as condom use (Hounton et al., 2005), helmet use (Quine et al., 1998), medical

compliance, and health screening (Champion & Skinner, 2008; Hochbaum, 1958; Janz & Becker, 1984; Rosenstock et al., 1988). The HBM has also provided a useful framework for seeking the cognitive determinants of a wide range of behaviours for four decades. The framework has also focused researchers' attention on variables that are prerequisites for health-related behaviour. Hence the HBM has formed the basis for many intervention programmes across a range of preventive health behaviours (Jones et al., 1987).

Furthermore, the HBM differs from other behaviour change models, for example TPB or TRA, in that there are no strict rules on how the HBM constructs combine to predict health-related behaviours. Instead, the model proposes that these constructs are likely to contribute to the prediction of health-related behaviours (Sheeran & Abraham, 1996). Therefore HBM has been widely employed in predicting a wide range of behaviours with health implications. For instance, Janz and Becker (1984) found that the primary components of HBM (i.e., perceived susceptibility, perceived severity, perceived benefits, and perceived barriers) were nearly always significant predictors of preventive health behaviour. The findings also reveal that perceived vulnerability and perceived barriers are the most reliable predictors of behaviour followed by perceived benefits, and perceived severity respectively. This result was further supported by the review conducted by Harrison et al. (1992), who found that perceived susceptibility and perceived barriers were the strongest predictors of preventive health behaviour.

2.6.2.2 The weaknesses of HBM

Two main criticisms regarding HBM were found in the relevant literature. First, the HBM does not explicitly clarify the linkages between its constructs, and provides no clear rules for combining the model constructs (Armitage & Conner, 2000; Sheeran & Abraham, 1996). Nevertheless, the lack of strict rules of combination can also be seen as a strength because it offers a flexibility that makes the HBM applicable and adaptable to many health-related behaviours and population groups. Second, regarding its predictive capability, some of the literature reviewed from the quantitative study illustrated that the four main components of HBM were significant predictors of preventive health actions in most cases. Nevertheless, the effect sizes of the four primary variables are usually very small (Abraham & Sheeran, 2005; Hunter

& Schmidt, 2004). This means that other crucial variables that determine health behaviour have not been accounted for by this model. Consequently, the HBM is incomplete, despite the high level of its adoption by health behaviour researchers.

In response to this limitation, some HBM developers, for example, Rosenstock et al. (1966, 1988), have extended the HBM with further measures such as 'cues to action' in 1966 and 'self-efficacy' in 1988. This is because these two variables have been identified as probably stronger determinants of health behaviour than those identified by the HBM. These could generally improve the predictive power of the HBM constructs. Likewise, other researchers have extended and adapted HBM in different contexts. For instance, King (1982), studying screening for patients with hypertension, extended the HBM to include a measure of the individual's perception of high blood pressure. However, although some researchers have attempted to improve the predictive capability of HBM, most of the extended variable(s) from their studies are location-specific because their extended variables are only applicable to the particular health behaviour under investigation) (Orji et al., 2012).

Orji et al. (2012), investigating an extension of the HBM for effective health intervention design, revealed that limitations regarding the effectiveness of the HBM were found. The first limitation is the low predictive capacity of the existing variables of the HBM coupled with the small effect size of individual variables. The second limitation is the lack of explicit rules of relationship and combination between the HBM constructs. In their paper, they proposed a solution to address these limitations consisting of: (1) they extended the model by introducing four new variables as possible determinants of health behaviour: Perceived Importance, Self-identity, Consideration of Future Consequences, and Concern for Appearance; (2) they exhaustively investigated the linkage or relationships between the HBM variables and their effect size; and (3) they tested the validity of both the original HBM and their proposed extended model on healthy eating behaviour. Also, they compared the predictive capacity of the extended model and the original HBM.

2.7 Combining the HBM and qualitative methods

2.7.1 The use of the HBM in qualitative methods

There were 16 studies using the combination of HBM and qualitative study (Asakitikpi, 2008; Beer et al., 2012; Bond & Nolan, 2011; Downing-Matibag & Geisinger, 2009; Duran, 2011; Efstathiou et al., 2011; James et al., 2012; Kleier, 2004; Mehta et al., 2012; Patel et al., 2001; Skiveren et al., 2010; Smith, 2012; Snipes et al., 2009; Thomlinson et al., 2004; Waite & Killian, 2008; Wilkinson & Callister, 2010). All studies showed that the HBM framework was used to explore the beliefs and/or behaviour of participants regarding the illness or disease and, also, the concepts of the HBM were used as “a preliminary template” for the process of data analysis and as a structure for explaining the results of the interviews. Data extraction for included papers comprised: author, topic, methodology, population/sample and summary. A quality appraisal was completed for each paper was a consideration of applicaton to the present study. Details are presented in Table 4.

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
1	Asakitikpi, 2008	Born to die: The Ogbanje phenomenon and its implication on childhood mortality in southern Nigeria	Ethnographic study, interview was carried out based on HBM	Participants were the “Uvwie” (a sub-ethnic group of the Urhobo) living in Effurun town, Nigeria. The article did not mention number of participants	Most participants who are Christian stated that they believed in the existence of other spirits, but they stated that the spirits are not from God. Consequently, combined with their background and socio-cultural context, they also believe in “the existence of <i>ogbanje</i> spirits”. These spirits are believed that they occupy children in order to “inflict pain” on their parents.	Strength: 1) Using HBM is appropriate for this study as it is useful to investigate health belief and health seeking behaviours related to the research objective. 2) Using ethnography is useful for the study as the participants are the group of people having specific cultural context. Weakness: The study did not mention the components of HBM in the findings and discussion which related to belief.	HBM could be applied in the study to describe factors that can be assessed which influence individual health behaviour.
2	Beer et al., 2012	A qualitative study on caretakers' perceived need of bed- nets after reduced malaria transmission in Zanzibar, Tanzania.	In-depth interviews	19 participants, both male and female, who are caretakers of children under 5 in Zanzibar	Malaria was seen as uncommon disease, and awareness of participants regarding malaria was high. The participants thought that Bed-nets are helpful for avoiding mosquito nuisance, especially on a rainy day due to the large number of mosquitos and malaria. Feeling uncomfortable while sleeping under a bet-net during the hot weather and the high costs of bed-nets were the main barriers of using bed-nets. High mosquito density was the main cue to using bet-nets. Participants had high perception of self-efficacy and did not find it difficult and complex to use bed-nets.	Strength: The study adopts all key-concepts of HBM and its results are based on HBM. Weakness: Using only in-depth interviews is not enough to investigate preventive health behaviour.	HBM could be applied in the study to evaluate participants' beliefs and make decisions that influence their preventive health behaviour within the particular context.

Table 4 Combining the HBM and qualitative methods

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
3	Bond & Nolan, 2011	Making sense of perceptions of risk of diseases and vaccinations	Semi-structured in-depth interviews to investigate perceptions of risk	45 Australian parents	Participants perceived that the health risks as well as their complications from health issues are not equally spread throughout their community. The study shows that the unfamiliarity or familiarity with the health issues as well as the different characteristics of individuals who have had the illness may prompt the individuals to perform preventive health behaviour. Almost all participants perceived that they are not susceptible or would not be at high risk of the new strain of flu. However, they needed to avoid taking risks with their children.	<p>Strength: 1) Using HBM combined with qualitative study is suitable for the study as they provide a greater understanding of participants' perceptions of health risk and complexities of their decision making. 2) The study adopts all key-concepts of HBM and its results are based on HBM</p> <p>Weakness: Using "a small non-randomly selected sample" may influence the ensuing information.</p>	HBM could be applied in the study to evaluate participants' perceptions of risk and make decisions that influence their health-related behaviour within the context.

Table 4 Combining the HBM and qualitative methods (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
4	Downing- Matibag & Geisinger, 2009	Hooking up and sexual risk taking among college students: A HBM perspective	Semi-structure interviews	71 college students studying at a large midwestern university	<p>Perceived susceptibility: Many participants perceived that they are not susceptible or vulnerable to sexually transmitted infections (STIs).</p> <p>Perceived severity: Individuals who take preventive measures to protect himself/herself perceived that he or she may receive the high impact of contracting STIs, and the illness would be severe.</p> <p>Perceived benefits VS perceived barriers: Even though most participants believed that personal protective measures such as condoms would effectively prevent STIs, some participants perceived that using condoms might thwart their chances for having sex, or compromise their pleasure.</p> <p>Perceived self-efficacy: An important issue among participants who failed to use protective materials for oral intercourse was a sense of confusion regarding how to use the materials.</p>	<p>Strength: The HBM is a useful framework to understand individual risk behaviours of participants, and offers suggestions for future risk-prevention programmes.</p> <p>Weakness: 1) The study did not mention cues to action. This concept is also important to investigate individual motivation to perform sexual risk behaviours. 2) Using only semi-structured interview is not enough to investigate risk behaviour.</p>	To explore and demonstrate how the HBM can be applied through qualitative study to explain about participants' beliefs and their preventive health behaviours.

Table 4 Combining the HBM and qualitative methods (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
5	Duran, 2011	Examination with the HBM of Women's Attitudes to Cervical Cancer and Early Diagnosis in Turkey: A Qualitative Study	The qualitative methods using case-study	11 participants consisting of married women between the ages of 15 and 49 being treated at the Süleyman Demirel University Research and Application Hospital and the Gynaecological and Children's Hospital in Isparta, Turkey and had never received a pap- smear test.	The interviews carried out in line with the HBM clearly show the reason why women did not exhibit positive health behaviour. Lack of perceived awareness influenced behaviours to prevent cervical cancer and early diagnosis. Lack of information about prevention of cervical cancer and early diagnosis provided was one of the important barriers for preventive action.	Strength: Using HBM as a theoretical framework is appropriate for this study as it is useful to investigate why women do not protect themselves from cervical cancer and why the pap smear test is not carried out on them. Weakness: Three main themes consisting of belief, knowledge and barriers did not mention clearly the aspect of HBM theory. Also, perception of barriers is one of the belief components which should have occurred in the theme about beliefs.	In the same way, to investigate why second-hand clothing sellers do not protect themselves from occupational health problems.

Table 4 Combining the HBM and qualitative methods (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
6	Efstathiou et al., 2011	Factors influencing nurses' compliance with Standard Precautions in order to avoid occupational exposure to microorganisms : A focus group study	Focus group discussion	32 nurses working in the two public general hospitals of Cyprus	<p>Perceived susceptibility: The participants mentioned that nurses working in hospital are susceptible to health risk by continuously being in contact with microorganisms.</p> <p>Perceived severity: The impact of disease acquired from a patient, such as AIDS, will be very serious as it may be the cause of death.</p> <p>Perceived benefits: The participants perceived that implementing the requirements of Standard Precautions can protect them from diseases in their daily practice.</p> <p>Perceived barriers: The participants mentioned several barriers such as Emergency situation, availability of equipment and time limitations.</p> <p>Self-efficacy: Many participants were not confident of avoiding health risks because it is difficult for them to change their behaviour.</p> <p>Cues to action: The participants stated that provision of care was considered as a cue influencing them to use Standard Precautions.</p> <p>Finally, the most influential hierarchy by activity/situation was death (perceived severity).</p>	<p>Strength: 1) focus group discussion allows participants to freely share common aspects and discuss similar experiences. 2) The HBM is appropriate to apply in this study as it has been successful in explaining a variety of human behaviours and attitudes.</p>	To consider HBM in occupational health and a qualitative study

Table 4 Combining the HBM and qualitative methods (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
7	James et al., 2012	Using the Health Belief Model to Develop Culturally Appropriate Weight-Management Materials for African-American Women	Focus group discussion	50 African-American women who were overweight and interested in losing weight	Most participants believed that genetics and culture made them more vulnerable to the the impact of being overweight. Reducing health risks, better physical appearance, and living life to the fullest were perceived as the important benefits of losing weight. A lack of motivation, social support, and information about reliable dieting were perceived as barriers to perform preventive action. Cues to action included being diagnosed with a chronic disease from obesity, saving money for buying clothes, and better physical appearance. Self-efficacy was initially influenced by a disappointing history of dieting.	<p>Strength: 1) The themes generated from each theoretical construct of HBM could develop materials such as intervention programmes. 2) The study adopts all key-concepts of HBM and its results are based on HBM. 3) Focus groups are helpful in assessing the needs of the target group and, in turn, the results can develop relevant programmes based on participants' needs.</p> <p>Weakness: The study did not mention behaviour to prevent obesity; thus, it is difficult to conclude that these perceptions may influence positive or negative behaviour to prevent obesity.</p>	In the same way, to use the themes generated from each theoretical construct of HBM in the finding section.

Table 4 Combining the HBM and qualitative methods (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
8	Kleier, 2004	Using the Health Belief Model to Reveal the Perceptions of Jamaican and Haitian Men Regarding Prostate Cancer	An ethnographic study	10 Jamaican and Haitian men living in South Florida.	<p>Perceived Susceptibility: Four participants mentioned that perceived vulnerability rose with people's age starting at 40 years, and one participant mentioned that "being black" increased the probability of risk.</p> <p>Perceived Severity: Urinary symptoms were identified from seven participants as slowing of the urine stream, frequency of urination, and nocturia; and one participant linked prostate issues with a decline in sexual drive. Also, all participants perceived that prostate cancer seems to be a serious issue as it could be the cause of death.</p> <p>Perceived Benefits of Taking Action: The benefits of receiving a physical check were identified by four participants as "knowing where you stand" and "not wondering whether you have a health issue or not".</p> <p>Perceived Barriers to Taking Action: Five participants said that the pain/discomfort and embarrassment of a digital rectal examination were important barriers to seeking screening.</p> <p>Cues to Action: Seven participants identified urinary issues as cues to taking action. The issues would lead them to find a way to check their prostates.</p>	<p>Strength: The concept of the HBM is appropriate for this study as the framework is related to individual perceptions and behaviours related to screening for diseases</p> <p>Weakness: 1) Qualitative methods are limited in that they typically involve very small samples and the results cannot be generalised. 2) The study did not mention behaviour to prevent prostate cancer; thus, it is difficult to conclude that these perceptions may influence positive or negative behaviour to prevent prostate cancer.</p>	To combine the principles of HBM and ethnographic study to implement and develop a comprehensive strategy for assessing the perceptions of health risk or illness.

Table 4 Combining the HBM and qualitative methods (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
9	Mehta et al., 2012	Using the health belief model in qualitative focus groups to identify HPV vaccine acceptability in college men	Focus group discussions	There were eight to ten participants in each focus group discussion and the study was conducted at a large Midwestern University.	Participants openly showed a lack of knowledge related to sexually-transmitted diseases in general and HPV in particular. Also, those interviewed had no knowledge related to HPV vaccine in relation to college-aged men. The lack of knowledge related to HPV further influenced perceived susceptibility, severity, self-efficacy, and sexual behaviours. Moreover, the area of most significance related to perceived barriers to vaccine acceptance was that related to side effects and pain of the vaccine.	<p>Strength:</p> <p>1)The study adopts the all key-concepts of HBM and its results are revealed based on HBM</p> <p>2) Focus group discussion proved to be effective in understanding predictors toward an acceptability of HPV vaccine</p> <p>Weakness:</p> <p>1) Only students from one university were recruited.</p> <p>2) Inadequate knowledge limited answers to questions and hindered the researcher from in-depth qualitative analysis.</p>	The HBM was used as a guide in developing questions for interviewing participants.

Table 4 Combining the HBM and qualitative methods (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
1 0	Patel et al., 2001	Understanding Barriers to Preventive Health Actions for Occupational Noise-Induced Hearing Loss	The Qualitative study: Focus Groups	32 miners volunteered from 2 mines	The findings show that perceived barriers are the most important obstacle of using personal protective devices of the miners. For this reason, the workers have to eliminate their perceived barriers first. If they can eliminate perceived barriers, they seem to perform positive health behaviour. This is because the perception of barriers tends to prevent the workers from even considering the use of personal protective devices.	<p>Strength:</p> <p>1) Focus group allowed researchers to gather large amounts of in-depth information on the construct because participants can freely explain their experience.</p> <p>2) Using HBM as a framework is particularly useful to understand barriers to preventive health action</p> <p>Weakness:</p> <p>1) The findings from this qualitative approach should not be generalised to other areas which have a different working context and environment.</p> <p>2) Focus group discussion was designed to elicit responses regarding a number of health concerns; each focus group contains only a brief discussion on perceived barriers specifically.</p>	The result of Patel et al. illustrated that the barriers could be categorised into two groups, internal and external barriers. This result can be applied for data analysis in this study.

Table 4 Combining the HBM and qualitative methods (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
11	Skiveren et al., 2010	Sun protective behaviour in renal transplant recipients.	A qualitative study based on individual interviews (semi- structured interviews)	10 Renal transplant recipients (RTRs) were interviewed	The participants were not susceptible to the health risk from sunlight exposure and did not perceive the high impact of skin cancer. Consequently, they did not give a high priority to sunlight protection. Even though, some participants were aware of their increased risk of skin cancer because of kidney transplantation, they also did not give precedence to sun protection. Furthermore, negative individual attitudes towards the use of personal protective equipment (wearing hats) and sunscreens were barriers against efficient health protective behaviour.	<p>Strength: The concept of the Health Belief Model is appropriate for this study as it is related to risk perception of UV exposure and sun protective behaviour</p> <p>Weakness: 1) The study did not mention perceived benefits, self-efficacy and cues to action as these are also the main concepts of HBM to investigate perception of health risk from UV exposure. 2) Using only semi-structured interviews is not enough to investigate risk behaviour.</p>	HBM could be applied in the study to evaluate participants' perceptions of risk and make decisions that influence their behaviour within the context

Table 4 Combining the HBM and qualitative methods (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
12	Smith, 2012	A qualitative analysis: using the Health Belief Model to explain Dengue fever in two communities in Trinidad and Tobago.	Focus group discussions	40 participants who were members of Malick and Upper Malick communities.	The findings illustrate the high perceived awareness of dengue fever and health risk from <i>Aedes aegypti</i> ; however, the illness was not high on the priority listing of participants. They also perceived that increase in the number of mosquitoes is a responsibility of their government, not a responsible of households. Their perception of the programme to control the numbers of <i>Aedes aegypti</i> was less significant in both areas. In general, members of both settings had knowledge of this kind of mosquito and dengue fever but their knowledge was not linked to any significant behaviour change.	<p>Strength:</p> <p>1)The study adopts the all key-concepts of HBM and its results are revealed based on HBM.</p> <p>2) Using the Health Belief Model as a theoretical framework is appropriate for this study as it is useful to investigate perceptions and beliefs regarding illness.</p> <p>Weakness:</p> <p>The study did not mention t behaviour to prevent Dengue fever; thus, it is difficult to conclude that these perceptions may influence positive or negative behaviour to prevent the fever.</p>	The HBM was applied in this study to guide data collection and analysis.

Table 4 Combining the HBM and qualitative methods (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
13	Snipes et al., 2009	Pesticides protect the fruit, but not the people	Community-based ethnography and public health risk assessment	99 farmworkers living in the “Lower Yakima Valley” of Washington State	The results from data analysis were categorised into 5 major themes: (1) Dry pesticides were viewed as a harmless powder; (2) Participants who have allergies as a health condition perceived that they are more likely to be affected by pesticide exposure; (3) Participants who perceived themselves as physical weak believed that the impact of pesticide exposure is more severe for them; (4) Personal protective equipment is used in response to financial pressure to work rapidly; and (5) some participants delay decontamination unless they find water at a suitable temperature for hand-washing.	<p>Strength:</p> <p>1) This research was conducted for a long period of time (around 1 year) with a large number of participants.</p> <p>2) The principal researcher reviewed the interview transcripts and detailed observation in their entirety and for debriefing summaries.</p> <p>Weakness: The qualitative method in general is limited as the results cannot be generalised.</p>	The HBM was used to guide the data collection and analysis in order to explore the different perceptions of individuals.

Table 4 Combining the HBM and qualitative methods (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
14	Thomlins on et al., 2004	Health beliefs of rural Canadians: Implications for practice	An ethnographic study	29 males and females living in central and northern Manitoba	The participants defined themselves as “Being healthy” as well as leading a balanced life. This can be considered in relation to the balance between the physical, mental, social, and spiritual aspects of the individual. Health-seeking behaviours could rate the wide range of food, sleep, physical activity, home remedies, and a belief in a spiritual being. They mentioned many sources of information provided including health professionals who listened, the ambulance service, neighbours, friends, their church, music, elders, and online sources.	<p>Strength: Using the ethnographic method in this study is helpful to understand how the informants interpret their experiences and make decisions that influence their preventive health behaviour within their socio-cultural context.</p> <p>Weakness: 1) The study did not explain how participants’ beliefs influence their health-seeking behaviour. 2) The qualitative method in general is limited as the results cannot be generalised.</p>	The HBM was used to identify factors that influence health related decision-making.

Table 4 Combining the HBM and qualitative methods (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
1 5	Waite & Killian, 2008	Health beliefs about depression among African American women	Focus group interviews	14 African American women living in an urban setting located in the northeast region of the United States.	Most participants believed that they were not susceptible to having depression. The reason is that the participants thought that depression is developed from having an unhealthy body, poor mind, a weak spirit, and inadequate selflove. They also perceived that patients with depression could die through suicide. The benefits of treating depression were directly related to their interpretations of the severity. For perceived barriers, there were several reasons presented as barriers to treatment for depression; for example, distrust of their healthcare providers; lack of knowledge; and lack of finance for therapy. Finally, for cues to action, the participants may be prompted by many factors, such as physical symptoms, media publicity from the radio or television as well as information from family members and their community.	<p>Strength: 1) HBM is appropriate for this study because it focuses on considerations of the participants' perceptions of an illness. 2) The study adopts all the key-concepts of HBM and its results are revealed based on HBM.</p> <p>Weakness: Although the study adopts all the key-concepts of HBM, it did not mention participants' decision-making; process in health-seeking behaviour also, the study did not mention much about participants' feeling and experiences</p>	The HBM was used to guide the data collection and analysis in order to explore the different perceptions about occupational health risk and behaviour.

Table 4 Combining the HBM and qualitative methods (continued)

	Author	Topic	Methodology	Populations/ Samples	Summary	Appraisal	Detail for applying in the study
16	Wilkinson & Callister, 2010	Giving birth: the voices of Ghanaian women	A focused ethnographic study	24 mothers who received health care at the Salvation Army Clinic in Wiameoase, Ashanti, Ghana,	<p>The results from data analysis were categorised into 5 major themes</p> <p>-Centering on Motherhood The role of motherhood and proven fertility are crucial for participants. Religion also has a role in determining whether to have children.</p> <p>- Accessing Health Care: Biomedicine, Ethnomedicine, and Spiritual “Cures” Several options include ethnomedicine, biomedicine, and the use of spiritual cures.</p> <p>- Viewing Childbirth as a Dangerous Passage Every participant knew a woman who had lost her child due to childbirth complications. A child may still die because of Divine Will.</p> <p>- Experiencing the Pain of Childbirth Women may suffer the pains of childbirth because it is God’s will. This was perceived as “a punishment” related to the fall of Adam and Eve.</p> <p>-Fearing the Effects of Witchcraft on Birth Outcomes Participants believed that witchcraft and spiritual sickness influence childbearing women. This led to seeking help from traditional healers.</p>	<p>Strength: Using ethnography is useful for the study as the participants are a group of people having a specific cultural context.</p> <p>Weakness: The findings and discussion did not refer to the concept of HBM as the authors just used it as a conceptual framework.</p>	HBM provides the concept of health beliefs including cultural attitudes that guide the ethnographic study.

Table 4 Combining the HBM and qualitative methods (continued)

As shown in table 4, only five studies regarding applications of the principle of the HBM and the ethnographic methodology were found (Asakitikpi, 2008; Kleier, 2004; Snipes et al., 2009; Thomlinson et al., 2004; Wilkinson & Callister, 2010). All studies combined HBM constructs and ethnographic study to develop and implement a comprehensive strategy for assessing the health beliefs or perceptions of health risk or illness. Ethnographic accounts were collected for the purposes of, for instance, discovering concepts and relationships in collected data and then organising these into themes that provided conceptual order and insight into the knowledge of and perceptions regarding the diseases (Kleier, 2004; Snipes et al., 2009), to evaluate the beliefs of their participants and make decisions that influence their behaviour within the context (Asakitikpi, 2008; Kleier, 2004; Snipes et al., 2009; Thomlinson et al., 2004; Wilkinson & Callister, 2010). HBM provides a useful framework by explaining the principal components that can be assessed which affect health related decision-making while in an ethnographic method the researchers seek the way to understand how the participants interpret their experiences and make decisions that influence their behaviour within the particular context (Thomlinson et al., 2004). The other purposes of the literature reviewed which examined HBM combined with ethnographic study aimed to draw data from a larger ethnographic study of workers to describe the modifying factors such as sociocultural contexts that shape the safety and health of the worker population (Snipes et al., 2009).

2.7.2 Challenges of studying people in their work context

Since each individual country has its own unique cultural, political and economic climate, studying people in their socio-cultural context such as their work context is challenging for researchers. Because the context of individuals, including their social or environmental context, is important as it affects individual behaviour (Blair-Loy & Wharton, 2002; Holloway & Galvin, 2016) and is also critical to the development of illness (Holmes, 2006), researchers must be sensitive to the context of their studies and immerse themselves in the situation and setting (Holloway & Galvin, 2016).

In the field of occupational health, qualitative study is particularly pertinent to occupational health research when little is known about certain aspects of the job that may influence the health and wellbeing of workers (Ballard et al., 2004). This is

because their work context, including their workplace environment, has its own unique characteristics influencing workers' health. According to table 4, there are three studies combining qualitative study and occupational health (Efstathiou et al., 2011; Patel et al., 2001; Snipes et al., 2009). All these studies show that the participants and their workplace have their own unique characteristics influencing workers' health: they involve nurses working in the two biggest public general hospitals of Cyprus, who are exposed to micro-organisms; coal miners in the Appalachian Mountains, who are at high risk of noise-induced hearing loss (Patel et al., 2001); and farmworkers in the Lower Yakima Valley, who are routinely exposed to a variety of health risks in the course of their work (Snipes et al., 2009). In the same way, for second-hand clothing sellers, the job has its own working conditions; also, second-hand clothing markets have their own context and environment influencing workers' health such as dust from the clothes being spread around the working area, and the effect of strong sunlight. For these reasons, an open and highly contextualised approach is needed. If researchers understand the context and culture in which the study takes place, they can locate the perceptions and actions of participants and grasp the meanings that they communicate (Holloway & Galvin, 2016). What is emphasised is the examination of the context that influences people's interactions or actions as well as the meaning that people ascribe to their experiences (Yilmaz, 2013).

The relevant studies indicate that a qualitative approach is more appropriate to focus on the individual and socio-cultural context in which the study takes place than the quantitative approach. This is because qualitative studies are concerned with illumination, context, process, meaning and interpretation; while quantitative studies are concerned with generalisation, causal determination, outcomes, prediction and cause-effect relationships through deductive reasoning (Hoepfl, 1997; Yilmaz, 2013). However, interviews alone are not going to work. As Patton (1990) stated that "observation can lead to deeper understandings than interviews alone, because it provides a knowledge of the context in which events occur, and may enable the researcher to see things that informants themselves are not aware of, or that they are unwilling to talk about" (Patton, 1990).

Holmes (2006), studying the social context of migrant health in the United States, stated that because the study question relates to subtle forms that are often difficult to

assess with a quantitative approach or interviews alone, this research thus makes use of ethnographic study as an anthropological method utilised over the long term. This is because anthropological methods, such as ethnographic study, are critical to investigating social disparities in health without simplifying the complex reality in which they are embedded. Specifically, participant observation is used, where the researcher participates in everyday life during an extended period of time, together with detailed fieldnotes that involve long-term immersion in a particular socio-cultural context. Observing interactions and listening to conversations enable the researcher to grasp and identify significant practices and cultural concepts of people in the setting of their community.

The relevant studies indicate that both an emic perspective and an etic perspective are needed for research on culture and cognition (Gelfand et al., 2001; Morris et al., 1999). What people perceive that they do and what they actually do is called the “emic or insider view”; it is valid in its own right and just represents different perspectives on the data; while observational data, rather more than interview data, is called the “etic or outsider view” and is subject to interpretation by the researcher (Morris et al., 1999; Young, 2005). Observers work in the field with a great degree of freedom and autonomy to investigate what they need to observe, how they filter that information, and how it is analysed. By contrast, even though the researcher has some freedom to conduct the interview questions, the participant probably plays a greater role in governing where the questioning leads. Furthermore, researchers may return to the participant with the analysed data for what is known. Therefore, participants may influence data analysis whereas those who are observed normally do not. Consequently, both emic and etic perspectives are necessary (Mulhall, 2003).

2.8 Summary of key finding and aims of the study

The occupational health and safety procedures implemented successfully in one workplace might not present the same findings in another workplace due to the difference of particular working contexts (Boonphadh, 2008). Individuals’ beliefs or perceptions of occupational health risk and risk prevention from work and the relationship between health belief and preventive health behaviour is considered as one of the key explanations of the diverse results. From the literature reviewed,

examining resources from over 100 studies, it can be concluded that HBM is the most appropriate theory to use in the current study regarding the perception and preventive health behaviour of Thai second-hand clothing sellers. As well, ethnographic study is a useful tool to access the participant's perceptions or beliefs and practices, as in the research objectives, allowing these to be viewed in the context in which the workers operate and thereby aiding understanding of the behaviour surrounding health and illness.

For this reason, the main goal of this study is to generate information, focusing on individual beliefs and their preventive health behaviours, beneficial to the development of occupational safety and health services provided to second-hand clothing sellers. Also, ethnographic methods were applied to capture information from second-hand clothing sellers in order to: **first**, explore the understanding of second-hand clothing sellers' beliefs about the occupational health risk and risk prevention and **second**, examine how this understanding influences to their preventive health behaviours. The research questions of this study consist of: **first**, what are the second-hand clothing sellers' beliefs regarding the occupational risks or risk prevention? **Second**, what are the preventive health behaviours of the second-hand clothing sellers? **Third**, what is the relationship between the second-hand clothing sellers' beliefs and their preventive health behaviours? And **fourth**, what are the implications for health promotion strategies for second-hand clothing sellers?

Chapter 3: Methodology and method

3.1 Introduction

In the present study, a combination of the study aims and the relevant literature led me to the decision to adopt ethnographic study as research methodology for the study. Therefore, in this chapter summary of existing HBM is revealed. Then a series of studies concerning qualitative research methods in general, choice of ethnography, philosophy and why it is the best method to answer the research questions are discussed. After that, ethnographic methods consisting of participant observation, interviews and note-taking are presented and explain how they were applied to collect study information. Finally ethical considerations and ethnographic analysis based on HBM are included.

3.1.1 Summary of existing HBM research

As presented in chapter 2, most of the literature concerning HBM and occupational health is mainly quantitative in approach. This is especially true for cross-sectional studies as most of them focused on measuring informants' risk perception and/or the other components of HBM. However, there are also a small number of qualitative studies that have been used to explore HBM. Although most studies examining HBM and occupational health have used a quantitative approach such as questionnaires, and although there is only limited qualitative work, apart for Efstathiou et al. (2011), Patel et al. (2001), and Snipes et al. (2009), qualitative research allows researchers to gather large amounts of in-depth information as this method intends to encourage informants to freely express their feelings and exchange their experiences and ideas on the studied subject (Efstathiou et al., 2011; Patel et al., 2001; Snipes et al., 2009). Patel et al. (2001) described that, because they do not yet have a good and clear definition of perceived barriers, the qualitative method allowed them to gather large amounts of in-depth information on a construct that could not be gathered otherwise using quantitative study or close-ended survey instruments. Efstathiou et al. (2011) also supported that researchers endeavour to study their topic of interest in depth through qualitative research design by creating groups in which participants are able to share

their viewpoints and experiences. These discussions aim to encourage participants to freely express their ideas, opinions and feelings based on the relevant objectives. Qualitative research methods in general are presented in the following section.

3.1.2 Qualitative research methods in general

3.1.2.1 Research paradigm

Paradigm is defined as the basic belief system that deals with ultimate principles. It symbolises “a worldview or the nature of the world”, the person’s place in it, and the range of possible relationships to that world and its parts. Paradigm guides researchers, not only in choices of their research methods but also in the other philosophical assumptions (ontology and epistemology) of what they study (Guba & Lincoln, 1994). The selection of research methodology in each study is based on the research activity and beliefs about the nature of knowledge or reality (ontology), the discovery of knowledge that informs the study (epistemology), and how that knowledge may be obtained (methodology). A consideration of the three elements of research paradigms as mentioned here must be a central feature of any discussion regarding the nature of a study because these elements give definition and shape to the conduct of an inquiry (Popkewitz & Zeichner, 1979, Tuli, 2011). Ontology, epistemology and methodology are presented in the following section.

3.1.2.2 Ontology, Epistemology and Methodology

In the choice of a qualitative approach, inquirers make certain assumptions. These philosophical assumptions consist of ontology, epistemology and methodology. Ontology is a stance toward the nature of reality and being or, briefly, it is the “reality” that researchers investigate (Creswell, 2003). Epistemology refers to the assumptions about how the knowledge of that reality can be gained (how the researcher knows what she or he knows); while methodology is the particular way or the methods used in the process of knowing that reality (Creswell, 2003; Guba, 1990). Guba and Lincoln (1994) also proposed that researchers with different research orientations may also be dissimilar not only in terms of research methodology, but also in terms of ontological and epistemological perspectives.

My point here is that understanding the perspective of ontology and epistemology is associated with understanding differences in research approaches. It is also crucial to understand that these different philosophical orientations will frequently dictate the selection of methodology and methods to be used in social research (Whitehead, 2004), and so consequently, the particular ontology and epistemology characterising the methodology (Blommaert et al., 2010). These concepts from the philosophy of knowledge – ontology, epistemology and methodology – go together to make a research paradigm (Lincoln & Guba 1985, 1988; Morgan, 2007).

The two major forms of research are composed of quantitative methodology grounded on the positivist paradigm; and qualitative methodology grounded on the interpretivist or constructivist paradigm (Tuli, 2011). The interpretivist or constructivist ontology claims multiple, local and specific constructed realities (known as the relativist position; i.e., both the researcher and the informant construct their own knowledge and reality) that will be studied holistically and contextually (Guba & Lincoln, 1994; Ponterotto, 2005; Tuli, 2011). The interpretivist or constructivist epistemology advocates a subjectivist and transactional stance that maintains that reality is socially constructed and, thus, the dynamic interaction between researchers and their informants is central to explaining and capturing the “lived experience” of the study informants (Guba & Lincoln, 1994; Ponterotto, 2005). These guide the qualitative methodology which, in turn, prescribes flexible design in which the researchers have a freedom movement between the steps of their research. On the other hand, the ontology of the positivist claims an objective, single, reality that will be studied without any viewpoint of the researcher; while the positivist epistemology emphasises dualism and objectivism. That is, the researchers, their participants and their topic are assumed to be independent of one another (dualism); by following standard procedures and being rigorous, the participant and topic can be studied by the researcher without bias (objectivism) (Ponterotto, 2005; Tuli, 2011). These guide the quantitative methodology which prescribes fixed design which favours the more restrictive option (Tuli, 2011).

Since constructivist researchers focus on better understanding of the world through “truthful reporting”, they employ first-hand experience and quotation of actual conversations from the perspectives of insiders (Merriam, 1998). They also employ

data gathering methods that are sensitive to context (Neuman, 2003), and which enable detailed and rich of social phenomena by encouraging informants to freely express their ideas and understand the researcher's quest for insight into a phenomenon that the informants have experienced. Owing to this, naturalistic observation, interviews and focus group discussion are the most widely used data gathering methods for researchers using a qualitative research methodology. By contrast, positivist researchers emphasise explaining behaviour through measurable data by using highly standardised tools (Ponterotto, 2005). The qualitative paradigm is presented in the following section.

3.1.2.3 The qualitative paradigm

The qualitative approach is based on constructivism-interpretivism (Fetterman, 2010; Guba & Lincoln, 1994; Johnson & Onwuegbuzie, 2004; Ponterotto, 2005; Sale et al., 2002). The constructivist (or interpretivist) paradigm can be perceived as an alternative to the received view (Ponterotto, 2005). In marked contrast to positivism's naive realism (a single objective external reality), constructivism adheres to a relativist position that assumes multiple, intangible mental constructions, local and specific in nature, socially and experientially based, and dependent for their form and content on the person or groups holding the constructions (Guba & Lincoln, 1994). Even though the post-positivist approach sought to soften the positivistic paradigm to inquiry, several social scientists continued to investigate significant limitations with this approach. Those who refute these paradigms do so on the grounds that they believe that one cannot define general inviolable laws that govern all human behaviour. Instead, individual behaviour must be viewed and interpreted according to the individual's intentions, motives, or purposes for action including through rules that have been consensually agreed upon and validated by people in the community. Not only is it crucial to discover observable human behaviour but also to comprehend the attitudes, intentions, values, and beliefs behind that behaviour (Candy, 1991; Plack, 2005).

Essentially, an interpretivist holds that reality is constructed in the individual's mind, rather than it being an externally singular entity (Hansen, 2004). The constructivist-interpretivist position espouses a hermeneutical approach, which maintains that meaning is hidden and must be presented through "deep reflection" (Schwandt, 2000;

Sciarra, 1999). This reflection can be provoked by interactive researcher–informant dialogue. Consequently a particular characteristic of constructivism is the centrality of the interaction between the object of researchers and their informants. Understandably, the constructivist or interpretivist paradigm provides the anchor or primary foundation for qualitative approach.

In the light of this, anthropological studies such as ethnography were deemed the most appropriate methodology for the present study rather than other qualitative methods, especially phenomenology and grounded theory. Therefore this study was conducted by observing a group of people (i.e., second-hand clothing sellers) for an extended period of time rather than focusing on a personal unique experience as in phenomenological research which is individualistic. Also, grounded theory is not deemed appropriate for this study as the objective of the present study is not to develop an explanatory theory of basic social processes. This differs from the goal of grounded theory which is to develop an explanatory theory of basic social processes by studying the environments in which they take place (Glaser & Strauss, 1967). Because second-hand clothing sellers have a particular context that shapes their experience and knowledge, which in turn influences their lifestyle and work behaviour, ethnography was selected as the most appropriate methodology as it concentrates on the individual’s views or the shared views and values of a particular culture (Sorrell & Redmond 1995). The following section illustrates in depth the reasons for adopting ethnography as the research methodology.

3.1.2.4 The reasons for adopting ethnography as the research methodology

Ethnographic research usually comprises multiple methods of data collection including, participant observation, interviews with audio- or video-recording, note taking (fieldnotes and fieldwork personal journal), collection of documentary and visual materials (photographing) (Fetterman, 2010; Goberman-Hill, 2015). These multiple methods were very insightful for the study as it composes of both insider and outsider perspectives. Ethnographic observation adds confirmatory power to the findings, that is, it triangulates information from various sources. It also produces new insights that may not have been articulated in interviews (Manton, 2011; Williams 1995). The methods also fit to my research objective (to explore the understanding of

insiders' beliefs and how the understanding is applied to form and guide an action (Blumer, 1969; Boonphadh, 2008; Brewer, 2000). These influenced my choice of research methodology.

According to Hammersley and Atkinson (2007), ethnographic study offers the following features: 1) Research takes place in the field to study people's actions in everyday contexts; 2) Data are gathered from multiple methods, but participant observation and/or informal conversation are normally the main ones; 3) Data collection does not involve following a fixed research design specified at the beginning and categories that are used for interpreting what informants say and do are generated out of the process of data analysis; 4) The focus is usually on a single setting or group of people; and 5) The data analysis involves interpretation of the meaning, functions and consequences of human actions and their institutional practices, and how these are applied in local contexts. In the light of these ethnographic characteristics, ethnography is considered appropriate for the present study. It employs these to understand deeply the context of the second-hand clothing market by studying the informants' daily work routine in their workplace.

Furthermore, most studies investigating the way people perceive and respond to health risks have emphasised cognitive factors, although, social, cultural, emotional, and economic factors have also been advocated in this field. Essential contributions to the current understanding of risk perception have come from sociological and anthropological studies (Alexopoulos et al., 2009; Douglas and Wildavsky, 1982; Short Jr, 1984). In addition, Krumeich et al. (2001) found contemporary approaches in medical anthropology relationships between cultural and social structures, beliefs of people and their health-related behaviour.

For these reasons, in the present study, ethnography is considered the most appropriate methodology to employ. It is preferred to other qualitative methods, especially phenomenology and grounded theory, as presented in the earlier sections. Moreover, ethnographic observation adds confirmatory power to the findings; that is, it triangulates information from various sources. It also produces new insights that may not have been articulated in the interviews, as the interviewees may falsely assume the interviewer would have prior knowledge of the circumstances of their daily lives, or

not regard it as relevant (Williams 1995). Consequently, ethnography provides a depth of understanding beyond that provided solely by interview-based approaches (Manton, 2011).

In addition, there are some differences between conventional and critical ethnography. Conventional ethnography attempts to grasp the informants' viewpoints and analysis that displays meanings by interpretation (Thomas, 1993); while critical ethnography attempts to link interpretations from data analysis to social structure and the system of power relationships (Anderson, 1989). For example, conventional ethnography explains what is; while critical ethnography asks what could be. Conventional ethnographers study culture for the purpose of describing it; while critical ethnographers do so to change it by explaining and opening to scrutiny power centres, hidden agendas, and assumptions that repress, inhibit, and constrain (Thomas, 1993).

3.2 Methods of data collection

Ethnography is “the work of portraying culture” (Spradley, 1979). It is a research methodology adopted initially by a group of anthropologists to study a particular culture, and understand its complexity within the community. Ethnography is designed to explore another way of life from the native's viewpoint (Spradley, 1980). For this reason, in a study based on ethnographic methodology, informants are studied in their everyday context and encouraged to describe things in their own way and language in order to discover their culture and understand the world from their perspective (Spradley, 1980). Hammersley and Atkinson (1995, 2007) explained that the main feature of ethnography is an intensive focus on exploring the nature of particular social phenomena. The ethnographer should participate in people's routines and daily lives for an extended period of time, listening to what they say, watching what happens, and asking questions through interview including collecting documents and artefacts (Hammersley & Atkinson, 2007).

In the present study, ethnography is considered the best method for answering its research objectives. This is because the multiple methods of data collection as employed by ethnography have been seen as a way of accessing beliefs and practices, which are the objectives of this research, allowing them to be viewed in the context in

which they occur and thereby aiding understanding of behaviour surrounding health and illness (Boyle, 1994; Morse & Field, 1995; Savage, 2000). Also, because the depth and detail of the context of second-hand clothing sellers is necessary to understand the social context of the workers and how this might influence their understandings about occupational health risks and taking actions, ethnographic study is considered the most appropriate method to employ to grasp the social context of the informants (Ellen, 1984; O'Reilly, 2005; Spradley, 1980). Also, as described earlier, I rejected other qualitative research methods as less suitable for the study.

Following the selection of the methodology, as recommended by Atkinson and Hammersley (1995), Hammersley (1992) and Spradley (1979, 1980), ethnographic methods typically focus on participant observation. Ethnographers immerse themselves in setting to generate rich understanding of social interaction that occurs (Atkinson & Hammersley, 1995; Hammersley, 1992). In the present study, participant observation was a particular emphasis as it was the main method of data collection. Also, along with the participant observation, ethnographic interview as well as note-taking (fieldnotes/fieldwork) including photographs were employed because they serve as a set of documentary data which later was analysed, interpreted and used in the writing-up process (Mason, 2002). Also, note-taking and photographs can enhance my understanding of the situation observed in the setting and provided hunches for further exploration (Boonphadh, 2008). Typically, an ethnographic study will take place over a period of several months, 6 months to 2 years, with at least the same amount of time spent in the process of data analysis and interpretations of the observations (Bentley et al., 1992; Fetterman, 2010).

According to ethnographic methods, ethnographic interviews which are different to any other qualitative interview as it focuses exclusively on making inferences from what people say in seeking to describe their culture (Spradley, 1979) are the most appropriate interviewed methods for the present study to grasp and emphasise interaction, social context and the social construction of the informants (Sorrell & Redmond, 1995). In addition, the ethnographic interviews were applied for getting people to talk about what they know (Spradley, 1980). The interviews help the researcher to grasp an “emic perspective” or informants’ perspective to challenge or confirm what I notice from my observations (Roper & Shapira, 2000). Once rapport

was established up to a reasonable level, interview and observation was conducted in a cyclical approach.

In the following sections, I explain of how I address the research methodology (theoretical) and then method (how I applied this in practice) by describing separately theory and practice. The details are as follows.

3.2.1 Observation

Participant observation has been accounted as a particular emphasis of data collection in ethnography (Atkinson & Hammersley, 1995, 2007; Spradley, 1980). This technique allows a systematic understanding of people's culture from the perspective of researchers who are being in the field (Spradley, 1980). The main aim of participant observation is to grasp the "etic perspective" or the perspective of "outsider" in the particular context related to the study interest (Boyle, 1994; Spradley, 1980). The information yielded from participant observation is used to confirm the information gained from interviews (Mulhall, 2003). In the field, researchers are necessary to be conscious of the role taken in relation to the people and their particular culture and context. Also, the researchers could constantly reflect on what they have learned (Angrosino, 2002; Hammersley & Atkinson, 1995). Furthermore, the method, participant observation, is distinctive because the researcher approaches informants in their own environment rather than having the informants come to the researcher (Bogdewic, 1992). During the time in the study settings, researchers make careful objective notes by recording all accounts and observations about what they see or notice as fieldnotes in a field notebook. In the role of informant observer, informal conversation and interaction with members of the study population are also important components of the method and should be recorded in the fieldnotes, in as much detail as possible; in particular, when the observer participates in the daily life of the people under study (Becker & Geer, 1957; Bogdewic, 1992).

Participant observation represents a powerful instrument for understanding other people's way of life. By mean of participant observation, researcher will observe the people's activities, the physical characteristic of the social situation and what it fell like to be part of the scene (Spradley, 1980). When conducting participant observation,

role of researchers are classified according to degrees of involvement of observers with informants and activities in the field of study, ranging from complete observer to complete participant (Hammersley & Atkinson, 1995; Spradley, 1980).

There is a continuity of participant observation in an ethnographic study that moves between acting as participant, participant-as-observer, observer-as-participant and observer (Byerly, 1969). According to the participant-as-observer role, researchers conduct observations by fully engaging themselves with the participants and taking part in the participants' activities with full interaction, but still letting the participants know that they are under observation (Nørskov & Rask, 2011). It is frequently used in community studies, where observers develop their relationships with participants through time, and where they are apt to spend more energy and time participating than observing (Gold, 1958). Spradley (1980) described this observation as where the participant engages in activities not merely to gain acceptance but to more fully learn the cultural rules for behaviour. Here the emphasis of participant-as-observer is placed on participating and "social interaction" to facilitate rapport and gain trust (Jaimangal-Jones, 2014; Walsh, 1998). However, Gold (1958) mentioned that there are two potential problems that may apply to the role of participant-as-observer; first, the participant may become "too much of an observer," due to subsequent identification and full interaction with the researcher; and second, the researcher may lose perspective and over-identify with the participant (Gold, 1958).

The role of observer-as-participant is assumed as the observer participates through limited interaction, does not pretend to be a full group member, and focuses on observing practice (Babble, 1986; Harrison, 2011). Spradley (1980) described the observer-as-participant role as "moderate participation" which refers to a level where the relationship between observation and participation is skewed in the direction of observation. The researcher is involved to a degree in the activities of those being studied but their participation is limited as their purpose and attention is more focused on observing what is going on, rather than being part of it (Robson, 2002). Taking up the observer-as-participant role would involve more observation than participation and often short, structured one-visit interviews (Bøllingtoft, 2007; Bositis, 1988; Gold, 1958; Halliday et al., 2008; Palonsky, 1975). Because the observer participates briefly and perhaps he or she also has only

superficial contact with the participants, there is an augmented risk of misunderstandings (Gold, 1958). On the other hand, as pointed out by Pearsall (1970), this role enjoys two advantages: first, participants may be more willing to talk to "attentive strangers" than to persons whom they know well; and second, there is less "temptation either for the observer to go native or for the natives to try to include him permanently in their lives".

The difference between the role of participant-as-observer and observer-as-participant is that the observer-as-participant role calls for comparably more formal observation, using precise and highly controlled methods that takes place in a particular setting; rather than informal observation, which involves a more casual observation of the surrounding environment. It is also not as time-intensive as that of the complete participant or the participant-as-observer. The role of observer-as-participant frequently serves for collecting specific information in a study setting where active participation is not allowed (Higginbottom et al., 2013). It also evokes less risk of "going native" than participant-as-observer (Gold, 1958).

The role of observer-as-participant, as explained by Gold (1958) and Pearsall (1970), includes more observation than participation. The researchers who adopt this method advance very slightly in their involvement with the informants. While still mostly involved in observing, they may conduct short interviews. Unlike covert activity which is typical of the complete participant (covert researcher) who collects data secretly without the consent of informants (Johnson, 1992), in the role of observer-as-participant the researcher's identity can become more overt as it becomes known to more of the insiders (Arber, 2006). The use of covert participant observation is of course highly controversial from the ethical concerns and moral problems perspective, and so researchers need to consider carefully the wisdom of adopting this method (Brotsky & Giles, 2007). Although May and Pope (1995) recognised that covert observation may be necessary in sensitive areas such as football hooliganism, as Clarke (1996) revealed through a thorough discussion of the merits of covert observation as informed by his study of a secure (forensic) unit, covert participant observation still requires considerable justification (Mulhall, 2003). The argument against covert study is that participants have the right to privacy and to know they are part of a study, while researchers have no special privileges (Johnson 1992).

Moreover, the researcher may suffer anxiety related to the risk of discovery because this would be very embarrassing (Bogdan & Taylor, 1975).

By contrast, the observer-as-participant role becomes more overt as it becomes known to more of the insiders. Overt or open observation occurs when informants are aware that they are being observed (Couchman & Dawson 1995; Turnock & Gibson, 2001) and also know the purpose of the study (Sarantakos, 1998). There are two advantages to this role. First, insiders may be more willing to talk to “attentive strangers” than they would be to people with whom they are more familiar. Second, there is less “temptation either for the observer to go native or for the natives to try to include him permanently in their lives” (Baker, 2006; Pearsall, 1970).

3.2.2 Interviews

Interviews are conducted alongside with participant observation to grasp an ‘emic’ perspective, or informants’ point of view (Atkinson & Hammersley, 1995). The interview provides the informants to talk about what they know and to confirm what the research perceive or notice from observations (Holloway & Galvin, 2016; Roper & Shapira, 2000). It enable researchers to obtain more information that could not be gathered from participant observation, thus this improves the comprehensiveness of the study (Brewer, 2000; Roper & Shapira, 2000). In the present study, the informal interviews were mostly conducted by using relatively open-ended questions, such questions typically begin with what, where, when, why, and how. These unstructured questions can facilitate the flow of the interviews, creating a flexible atmosphere, and encouraging the informant to freely express their ideas. Also, the questions help the researcher to illuminate the conflicting worldviews of the informants (Brewer, 2000; Fetterman, 2010). However the stream of conversation between researchers and informants depends on the topic of the study (Fetterman, 1998).

Following the recommendation of Spradley (1979), the three kinds of questions consisting of ‘descriptive’ (asking for a description), ‘structural’ (asking for an explanation), and ‘contrast’ (finding out how something can be different), were employed to conduct the interviews with the informants of this study. Descriptive questions are usually open-ended and used to encourage individuals to talk about

social situations in their daily lives. Structural questions provide more specific cultural information and are frequently asked simultaneously with the descriptive questions. These questions enable the researcher to discover the domains from the information gained. Contrast questions provide the researcher with a greater possibility to discover the meaning behind the words used. In the present study, I began the interviews at the opening phase by using descriptive questions which are easiest to ask and they are used in all interviews to examine how things work or what happens around the place whereas structural and contrast questions were used following the descriptive question to expand understanding of information gained (Spradley, 1979).

3.2.2.1 Transcribing and translating

With the permission of the informants of the study, the interviews were recorded using a recording device such as recorder. Then the interviews were transcribed in the full sense, as accurately as possible. For the same reason, I carefully translated the interview transcripts from Thai to English. After that, the data was rechecked again by the fieldwork supervisor, Dr Chompoonuch Supapwanich. She is a nurse who graduated in a field relevant to occupational health, PhD. in Population Health, University of Manchester to ensure that the translation was accurate before presenting in my written thesis.

3.2.3. Fieldnotes, fieldwork and artefacts

Alongside participant observations and interviews, note taking and photographs as the other important components of ethnographic fieldwork are kept during the period of data collection (Fetterman, 1998). Fieldnotes are applied in ethnographic fieldwork for recording observational and interview data enhancing the researchers' understanding of the situation observed (Atkinson & Hammersley, 1995, 2007). Researchers should selectively record the fieldnotes because it is impossible to capture everything from the observation (Atkinson & Hammersley, 2007). In the fieldwork, researchers insert their own perception from what they observe and notice (Spradley, 1980).

Photographing was employed to describe field in this study because it has become a method to understand specific themes within informants' everyday realities as

photographs are thought to reproduce the reality in front of the camera's lens (Lenette & Boddy, 2013). It was expected to enable readers who are not familiar with the informants of the study to understand some contexts unique to the informants (Boonphadh, 2008), especially second-hand clothing sellers because their context is not well known. Also, it allows richer sets of data to emerge rather than focusing on conversations alone (Lenette and Boddy, 2013). Moreover, photography elicits extended personal narratives which illuminate viewers' lives and experiences (Schwartz, 1989).

The inclusion criteria for taking photographs in this study composed of 1) The routine of working day of second-hand clothing sellers 2) An environment or location of the second-hand clothing markets including the sellers' houses to explore the health threats on work exposure such as ventilation or air flow, brightness and sunlight and 3) Preventive health behaviours of the sellers such as heavy weight lifting, moving or transferring clothes.

3.3 Preparation for entering the field

Wellin and Fine (2001) mentioned that there is a lack of preparation before entering the field for fieldworkers as it is difficult to prepare for unpredictable situations. They also suggested this reinforces the value of ethnographic study as an elusive combination of theoretical orientation, bodily presence and spontaneous insight. Indeed it is impossible to adequately prepare people for the fieldwork experience, due to the uniqueness both of the individual and the field itself. However, inadequate preparation has implications for the novice fieldworker as uncertainty in the field is great (Murphy, 2013). There is an absence of accurate 'anticipatory socialisation' that might help students cope with uncertainty.

In preparing researchers for field work, it should be possible to challenge the ideal that fieldwork is a solitary ordeal and a rite of passage (Wellin & Fine, 2001). The rules of ethnography and fieldwork should be made more explicit, challenging and transparent. As a result there could be more discussion regarding potential problems and identification of solutions. Finally, recognising that there is a process for

developing competence in fieldwork may help in the support, preparation and development of novice fieldworkers (Murphy, 2013).

The process of preparation prior to the period of data collection that I undertook consisted of selecting the field of study, obtaining permission to enter the field, developing an aide-mémoire as a guide for the interviews, interviewing informants/key informants, selecting sampling strategies and obtaining ethical approval. These are presented in the following section.

3.3.1 Selecting the field of the study

The fields of study are the second-hand clothing markets and the second-hand clothing sellers' houses. There is a variety of locations in the southern part of Thailand especially in the three southern border provinces where the big second-hand clothing markets are located. The field of the study was selected based on the following criteria.

3.3.1.1 Location

I have selected the southern part of Thailand as the location of the field because the southern part of Thailand is the region holding many big second-hand clothing markets especially the three southern border provinces (Yala, Pattani and Narathiwat) due to the convenient access via the big ports of the neighbouring countries such as Malaysia, i.e., second-hand clothing goods are imported from different countries, in particular, Japan, Korea, etc., to the big port in Malaysia and, then, transported to Thailand across the border provinces such as Pattani or Yala. Also, carrying out the study in the southern part of Thailand is advantageous because I am fluent in the southern dialect and understand the regional language (Boonphadh, 2008). There are 14 provinces located in the southern part of Thailand, including Yala province (figure 39), one of the largest and most important cities in the three southern border provinces, which is known as one of the biggest sites of second-hand clothing markets in the southern part of Thailand.



Figure 39 Map of Thailand and Yala province (highlighted red)

3.3.1.2 Site selection

The workers are scattered all over Yala province, the southernmost province of Thailand, 1,039 kilometres from Bangkok (the capital city of Thailand), neighbouring provinces consist of Pattani, Narathiwat, and Songkla and its southern part borders Perak and Kedah of neighbouring country, Malaysia. The total area size measures 4,521.1 km² and the population was 498,257 (Data recorded in July 2012) (Yala Provincial Social Development and Welfare Office, 2013).

Due to the information about the second-hand clothing markets provided by some wholesalers and from my previous observation, I have selected the biggest district of Yala province that is Mueang district because it has four big markets, with approximately 300-400 sellers. This area, the siselected, measures 258.0 km² with a population of 162,530 (Data recorded in July 2012) (Yala Provincial Social Development and Welfare Office, 2013). A map of the site selected, Mueang district, Yala province, is presented below as figure 40.



Figure 40 The site selected shown within the black circle (Mueang district, Yala province)

3.3.1.3 The study setting

According to Mueang district, Yala province, there are many second-hand clothing markets located in the area, around 10 markets. I made a decision to choose only four markets as these markets are big and located in the heart of the city. These four markets, where I was less known to the second-hand clothing sellers, consisting of the “Night market”, “New market”, “Coconut market” and “Budee market” were decided as a study setting. Before entering the field, I went around the markets on a motorcycle and walked around the areas to observe the general environment and fields of the study setting. The details of each second-hand clothing market are as follows:

Night market

The “Night market” or “Mazda market”, approximately 1.5 Rai or 2,400 m², 52 stalls, around 100 sellers, is located in the central of Mueang district, Yala province. It is open from around 17.30 to 21.00 every day. The weather during the opening times is pretty good. The wind blows sufficiently in the area and it

is not too hot, 25-29 Celsius. This market is busy around 18.00-20.30. When I walked through the market, I did not feel uncomfortable until I stepped in the stalls. Then, I perceived the clothing smell in my nose especially when I was standing near the unwashed clothes. But this bad smell was not as strong as those I experienced in the other markets, in my opinion, because this market has a good airflow. There are a lot of street lights. So, light isn't a problem in this market. I did not see a lot of dust spreading in the air, I think because most of the floor of the market is cement.



Figure 41 The night market at night



Figure 42 Lights are installed in every unit

New market

The “New market”, approximately 1 Rai or 1,600 m², 45 stalls, around 90 sellers, 250 metres from the “night market”, is located in the area of the fresh food market, the centre of Mueang district, Yala province. It is open between around 10.00 and 19.00 every day but most sellers open their stalls around 15.30-19.00. The weather around 15.30 is still hot (30+ Celsius) because of the strong sunlight until 16.30 then it becomes cooler (24-29 Celsius). This market is busy around 16.00-18.30. When I walked through the market, at some stalls, I felt uncomfortable because of the lack of airflow from the tightly packed goods and the big rooftop tents. Also, I perceived the smell from the unwashed clothes as well as the spreading dust (from clothes) in the air (of some stalls).



Figure 43 The hot weather around 15.30



Figure 44 Lack of ventilation from the tightly arranged clothes and roof tents



Figure 45 The narrow footpath

Coconut market

The Coconut market is the biggest second-hand clothing market in the three southern border provinces of Thailand (Yala, Pattani and Narathiwat provinces), approximately 20 Rai or 32,000 m², 150-180 stalls, with around 300-350 sellers. It is located near the train station and temple, in Mueang district, Yala province. It is open from around 08.30 to 14.00 every Tuesday, Thursday and Saturday and busy from 09.00-13.00. The weather during the opening times is hot because of the strong sunlight (30+ Celsius). When I walked through the market, I felt uncomfortable because of the hot weather, a lot of transport, smoke from the street cooking such as the grills. Also, when I stepped in the clothing stalls, I perceived the clothing smell like the other second-hand clothing markets. Generally, the air flow is quite good except in some second-hand clothing shops, approximately 40-50 shops. I felt uncomfortable when I entered to these shops because of the lack of airflow. However, for some shops, the ventilation is fairly good as I felt more comfortable.



Figure 46 The strong sunlight during opening time

Budee market

Budee market is the second biggest market in Yala province. This market is located in Budee town, 3.0 kilometres from the centre of Yala province. It has two zones, the fresh market zone and the second-hand clothing stall zone. 90-100 stalls are arranged on a road approximately 1.5 kilometres long. It is a completely outdoor market because it does not have any buildings like those in the Coconut market. It is open between around 08.30 and 14.00 once a week, on Sunday only. When I walked through the market, I felt uncomfortable because of the really hot weather, compared with the “Coconut market”. I think, this is because it does not have any buildings: the stalls have only have tent roofs for protection against the strong sunlight. As well, I felt uncomfortable from the bad smell, in some stalls, as well as smoke from the preparation of street food as in the “Coconut market”, in some areas. Moreover, it has a lot of customers and their vehicles but I think these are fewer than the “Coconut market”. The air flow in this market is good.



Figure 47 Strong sunlight during opening time



Figure 48 Dust spreading in the area inside the stall

3.3.2 Obtaining permission to enter the field

For obtaining permission to enter the field in Thailand, because there were no health authorities or government sectors for direct responsibility to those who work in this career directly, only obtaining consent from the study informants was required.

3.3.3 Developing an aide-mémoire as an interview guide

The aide-memoire used in an ethnographic study may be incorporated into a diary or used as memos (O'Reilly, 2009). It is a broad guide to the topics that might be covered in the interviews, rather than the actual questions to be asked. Unlike the interview guides used in structured interviewing, an aide memoire is flexible and open-ended (Burgess, 1984). As well, it is intended as an interview guide to be applied in conducting ethnographic interviews. The aide-mémoire is not a script for interviewing. The exact wording of the interview questions will change based on the situation. Before entering the field, I prepared the three types of ethnographic interview questions adapted from Spradley (1979). These comprised descriptive, structural and contrast questions, some of which corresponded to the issues outlined in the aide memoire; while others were induced directly from the interview data. There were some differences of interview questions for each informant depending on the observational data from the note taking (field notes, fieldwork, personal journal and photographs). It means that, in this study, observation informed the interviews. The details of the three types of ethnographic interview questions with examples are presented in the section 3.4.2.5 (interviews).

3.3.4 Interview informants/key informants and sampling strategies

In the present study, the potential informants were second-hand clothing sellers aged 18-60. These ages were chosen because they are of working-age adult in Thailand. Also, Thai working- people aged 18-60 are affected by occupational health risks from their working condition (Tawatupa et al., 2013). All have been working as second-hand clothing sellers for at least 6 months (defined as a permanent job) and were willing to share their ideas and experiences. Despite the fact that it was not practical to state the number of informants in the study regarding of the ethnographic research during the process of preparation (Germain, 1993), in applying for initial research clearance, applicants are required to state the number of interviews or observations they will conduct (Adler & Adler, 1987). In the present study, before entering the field, the estimated number of participants was based on literature reviews with regard to the qualitative studies. Consequently, in this study, the sample size selected is

between 20 and 30 informants. However, at the final stage, the saturation concept can be used to justify the size of one's sample (Bryman, 2012).

With regard to sampling strategies, purposive sampling is the most commonly used technique in an ethnographic study (Fetterman, 2010). It is used to recruit study informants where informants are selected on the basis of their experience of, familiarity with, and current involvement in, the field of interest of the study, or the research questions (Fetterman, 2010; Spradley, 1979). As the collecting of data progresses, a "snowball or chain sampling technique" is applied when new informants are recommended by earlier selected informants (Kuper et al., 2008). Besides purposive and snowball sampling, additional informants are selected using opportunistic sampling (Germain, 1993) where informants are unexpectedly recruited. These three sampling strategies are interchangeably used in the field based on progress of the study and appropriateness of situations to ensure the coverage of samplings of people, time period and context. Among the informants participating in the study, "key informants", who are competent and outstandingly keen on volunteering to share their experiences, are able to provide particular information, experience, knowledge and aspects of the study interests (Angrosino, 2005; Bryman, 2001; Germain, 1993). The next section describes obtaining ethical approval before entering the field.

3.3.5 Obtaining ethical approval

Ethical issue is a never-ending concern for all researchers and unavoidable consequence it pervades every step throughout the study period from conception and research design to dissemination of the results (Goodwin et al., 2003). There are potential dilemmas that cannot be averted and foreseen. The dilemmas develop spontaneously and unexpectedly, perhaps in situations where the researcher has little control over events (Goodwin et al., 2003). Dewalt et al. (1998) and Punch (1994) stated that those methods used in social research especially incorporating observation, such as ethnography, display the more frequent and acute ethical issues. Consequently, a plan to illustrate ethical awareness, how to act morally, and obtain ethical approval throughout the study period was prepared (de França Doria, 2010).

Regarding an ethical framework, as Pink (2015) described that it is difficult to suggest an ethics framework for an area of research practice that is already evidently cutting across applied research agendas and academic disciplines. Researchers working with different types of research question, context, and participant will need to ensure that their ethical practice conforms to those of their own professional associations and academic institutions. In the present study, an ethical framework was followed the guideline of Faculty of Health and Social Care, University of Hull, based on research questions, participant and context of the study. Moreover, framework and ways of working should be revised and adapted to ensure ethical research and best practice (Kelly et al., 2013).

During the process of data collection in the qualitative study, unexpected themes can arise during the data analysis; thus, the potential uses of the data at the time of the interviews are not always clear to the researcher. Furthermore, he or she may need to archive interviews and further continue asking questions which could then be accessed for future study. If so, informants should be provided information and given the opportunity to withdraw their consent at any stage of the study period (Orb et al., 2001; Sinclair, 2004; Fernandez et al., 2003). In qualitative study, to ensure that informants achieve adequate consent, there are two approaches for obtaining consent from the informants consisting of one-off event and on-going process consent (Houghton et al., 2010; Moore & Savage, 2002; Richards & Schwartz, 2002). One-off consent means that informants will be asked to give very general consent at the opening phase of the study, while on-going process consent is implemented by frequently asking. Informants will be treated and provided information provision (and consent) each time throughout the period of data collection (Houghton et al., 2010; Richards & Schwartz, 2002). Many researchers described that consent should be provided to informants as an on-going process rather than one-off event. It means that informed consent should not be regarded as a single event. Instead, researchers should provide information and repeatedly request consent each time they collect data from a study informant to ensure that they are aware that data are being collected and that they are willing to continue participating in the study (Cameron & Murphy, 2007; Lawton, 2001; Moore & Savage, 2002; Richards & Schwartz, 2002).

This again reiterates the importance of researchers balancing the need to provide adequate information in an appropriate way with ensuring the information provided does not deter people from participating (Cameron et al., 2004; Cutliffe & Ramcharan, 2002; Miller & Bell, 2002; Reid et al., 2001; Smythe & Murray, 2000). Therefore, in the present study, consent for observation is seen as a process, ongoing, event as this is a more appropriate way for ethnographic research.

During the stage of ongoing observation or interview, it is very unlikely that this study would cause any harm. However, the informants might feel uncomfortable due to the interview or observation because the potential harm to informants in qualitative social research is often quite subtle and stems from the nature of the interaction between researcher and informant, for example, the researcher asking more questions than the informant feels comfortable answering may cause harm; or harm may be caused by not showing enough interest so that s/he feels s/he has been ignored and disregarded (Guillemin & Gillam, 2004). Researchers should observe negative expression presenting as discomfort in informants while interviewing: for instance, the informant starts fidgeting in his/her seat, touching hand to his/her mouth, and speaking more slowly (University of Vanderbilt, 2012).

Furthermore, according to the literature reviewed, it is possible for any interview topic, depending upon the context to be a sensitive one. However, some topics have a higher probability of causing sensitive emotion or embarrassment than others. These topics include those that delve deeply into people's personal lives or experiences; also topics that explore deviant or illegal activities, expose the vested interests of powerful persons or persons engaged in coercive or domineering behaviours, or are of a meaningful religious nature (Corbin & Morse, 2003; Lee & Renzetti, 1990). The risks associated with qualitative interviews, such as unstructured interactive interviews, should not be compared to clinical trials that use experimental drugs or treatments that may cause potentially disabling or even lethal side effects (Cassell, 1980; Corbin & Morse, 2003). However, the reviews need to be rigorous as its quantitative counterpart (Denzin & Lincoln, 2011; Maxwell, 2004; Sofaer, 1999). There are some differences between rigorous qualitative and rigorous quantitative research (Sofaer, 1999). In quantitative data analysis it is possible to generate statistical representations of phenomena which may or may not be fully justified since, just as in qualitative work,

they will depend on the judgment and skill of the researcher and the appropriateness to the question answered of the data collected. The basic strategy to ensure rigour in qualitative study is systematic and self-conscious research design, interpretation, communication, and data collection (Mays & Pope, 1995). In addition, in qualitative research, especially that using unstructured interactive interview, informants retain considerable control over the process (Cassell, 1980; Corbin & Morse, 2003). No one can predict what will be said in the course of the interview, the feelings it will provoke, or any long-lasting effects. Much depends on the ability of the interviewer to judge and respond to the emotional state of the informant (Kavanaugh & Ayres, 1998). Also important is having a code of ethics to guide the entire research process from framing the question, to choosing a population, to writing up and presenting the findings (Munhall, 1988).

With regard to obtaining ethics approval before conducting the study, in health care settings, one of the first formal ethical obstacles is attaining ethical committee approval. Therefore, at the outset of a research project, considerable attention is focused on addressing and anticipating ethical issues. This endeavour can be aided by a review of the research literature wherein a wealth of discussions can be found on issues of informed consent, harm, privacy, exploitation, trust, confidentiality, deception, and betrayal (Fetterman, 1989; Goodwin et al., 2003; Hammersley & Atkinson, 1995; Holloway & Jefferson, 2000; Punch, 1994; Wolcott, 1995).

Application to the Faculty of Health and Social Care Research Ethics Committee, University of Hull, requires considering potential ethical issues during the life cycle of the thesis. Also, this step helps researchers to ensure that the study informants who are involved in the study are not at risk of harm during the data collection. For these reasons, I submitted an application for ethical approval, accompanied by a copy of the research proposal, the aide memoire, an information sheet, a data management plan, an ethics peer review form and consent forms, to the committee for approval of the research in October 2014.

Once in the field, I initially introduced myself and explained the objectives of the study, measures taken to ensure confidentiality including data protection, and the risk and benefits of the study to the study informants. Every step of data collection is

regarded as an indication of informants' willingness to participate in the study. Once potential informants agreed to take part in the study, I then gave her/him a copy of the information sheet and a consent form for them to sign. Signed consent forms were obtained from literate informants. For illiterate informants, a legally authorised representative was present while the consent form was read out to them. The witness can be a family member, friend, or someone else who is independent of the researcher.

Despite the fact that this study is very unlikely to cause any harm, it seems possible that the interview topics might be sensitive, embarrassing and upsetting. In order to avoid or limit these issues, firstly, I explored with informants before interview or observation arrangements for avoiding disturbance: for example, the period of time taken for interviewing or the times convenient for the informants to participate. Secondly, during the interview, I observed negative expressions of discomfort in the informants and stopped the interview or observation if they felt disturbed or inconvenienced, luckily, all informants did not show the negative feeling expressed during the interviews. Thirdly, the interviews were avoided when the informants were not convenient, for example, when they had customers, were still busy or preferred to rest. Also, every step of data collection is regarded as an indication of informants' willingness to take part in the study.

Moreover, all informants were assured that they had the rights to withdraw from the study at any stage of data collection. Also, they are able to refuse answering any questions, and to ask questions related to the study. Before taking photographs, I obtained permission from those in the images. I used non-identifiable photographs to avoid informants being identified and to anonymise individuals (Crow & Wiles, 2008; Lau et al., 2009; Lenette & Boddy, 2013). Consequently, the faces of informants appearing in photographs were hidden as well as their names, date and time of photo capture. Also, the informant was told precisely about the nature of the images to be taken and whether he or she is likely to be recognisable. Also, they could view the images at any time and could withdraw consent, in which case the image was deleted permanently from the database (Hood et al., 1998). Finally, all collected data was anonymised and not reported at any stage of the study and confidentiality of the data collected was maintained.

3.4 Being in the field: Collecting data

3.4.1 Role in observation

According to the study, the aims of the observation focus on understanding the second-hand clothing sellers' routine of working day, their preventive health behaviours, the health risk including markets' environment and the second-hand clothing sellers' social situation. Given that being visible, interacting with informants and participating in some particular activities will be beneficial for gaining trust from them and enabling me to grasp a wide range of information covering the research objectives. For this reason, I employ the role "observer-as-participant" (Roper & Shapira, 2000). Being in the field, during the time in the participants' stalls, I occasionally helped them working in some process such as putting clothes on hangers or hanging clothes. I still mostly involved in observing and conduct short interviews depending on encountering situations and opportunities. Finally, as the role of observer-as-participant which researcher's identity can become more overt as it becomes known to more of the insiders. I made myself visible to the informants studied.

3.4.2 Participant observations and interviews

3.4.2.1 Informants and key informants

Being in the field, it was uncomplicated and I felt comfortable to recruit informants as they were willing to participate in the study. At the beginning of the study I spent two weeks at the markets and began to engage clothes sellers in conversation about the study. I selected the informants by the three sampling strategies mentioned earlier. Firstly, during my initial visits, when sellers expressed an interest in participating I gave them a "Participant Information Sheet". After that, I chose snowball sampling to recruit the new informants by introductions from the earlier selected informants. Besides, the opportunistic and snowball samplings were adopted based on purposive sampling to ensure inclusion of key informants. At the end of the fieldwork, in conclusion, I had interviewed 27 sellers in total.

3.4.2.2 Participant observation

Following the principle of participant observation described by Spradley (1980), at the early stage of data collection, I employed “descriptive observations” to understand and gain general ideas regarding the socio-cultural context of the informants’ community including the general environment and field of the setting. I walked and rode (a motorcycle) throughout the second-hand clothing markets in the opening phase of data collection. I also recorded what is going on in the field as well as the sellers’ everyday life in my fieldnotes and took some photographs which present the general activities of informants occurring around the market place including the workplace environment. I then undertook more “focused observations” and “selective observations”. For instance, I went with sellers to observe a typical working day in the markets and in their homes. These observations were wider than the first ones. Then I focused on their preventive health behaviours and the health risks including from the market environment and the second-hand clothing sellers’ social situation.

What I actually did in practice regarding participant observation was that I spent the time in the second-hand clothing markets since the informants arrived at the markets until they finished work (around 8.00-13.00 for the day time market and 17.30-20.30 for the night market). During the time in the market I spent time both in the informants’ stalls and other areas in the markets in order to observe the market environment and visit other informants’ stalls for making rapport as well as observe second-hand clothing sellers’ community. Consequently, I spent not all time in the informants’ stalls as I walked in and walked out several times depending on the situation, such as when I noticed that the informants want to take a break or when they had business with others, for making space between me and my informants. During the time in the stalls, I talked with the informants with general conversation together with observed their work behaviour. Because the informants were aware that they are being observed, to avoid making them feeling uncomfortable, I did not stare them or did not record a fieldnotes/fieldwork immediately in the stall. Occasionally I helped the informants doing their work in the stalls, for example, putting clothes on hangers, hanging clothes and grouping clothes from the opening time until the closing time of

the markets and sometimes in the informants' house (if I visited them to observe the process of separating clothes).

Furthermore, from the studies regarding the optimal period of observation, even though most authors concluded that the period of observation should be approximately 130-200 hours (Christian, 2005; Smith et al., 2004; Ware et al., 1999), in this study, the duration of observation for 27 informants was 265 hours in total during the 6 month period of data collection, from December 2014 to June 2015, length of each observation was 2-4 hours and total observation hours (each person) was 7-18 hours depending on the informants' working process, for example, some informants worked only the step of grading and grouping clothes or some informants sold their clothes at only one market while the other informants sold their clothes more than one market.

3.4.2.3 Fieldnotes, fieldwork and photographs

I updated the note-taking (fieldnotes and fieldwork) as soon as I could to prevent losing information obtained from the process of participant observation (Mulhall, 2003). I recorded both fieldnotes and fieldwork in the same diary but in separate styles after finishing observation day-by-day. In the fieldnotes I wrote things what I see or notice (such as the informants' work behaviour, workplace environment, or cultural context of the sellers), what I heard (from the informants' conversation), whereas in my fieldwork, I inserted my point of view about how I felt, perceived and interpreted towards the informants' statements, their reaction, work behaviour, the environment of the workplace, and even the problems I encountered. The notes in separate styles enhanced my understanding of the situation and benefited for the further process of the study such as data analysis and interpretation broadening the comprehensiveness of the study results.

To give an example, when I interviewed one of the informants who sold children's clothes, in the fieldnote I quoted what I noticed.

When she separated the clothes around 50 per cent, she felt itchy at her left eye. Then it was swollen. She told me she sometimes dropped her itchy eye with the eye drop.

And what I recorded in my fieldwork was:

She did not use personal protective equipment such as eye glasses to prevent eye irritation from dust, even though she knew that she has an allergy to dust.

In addition to the fieldnotes and fieldwork, the routine of working day of the sellers, environment or location of the market place including the sellers' houses and preventive health behaviours of the sellers were recorded using a camera, considering that some particular circumstances were better explained using pictures. The example of fieldnotes, fieldwork and photographs is presented in Appendix 5.

3.4.2.4 Pilot interviews

Pilot study is defined as “prior research”, but it can be focused more precisely on researchers' own viewpoints and theories (Maxwell, 2008). The pilot interviews have been used to test the trustworthiness of research by asking informants to offer their feedback on research accounts (Bloor, 2001; Whyte, 1996). Pilot works have greater use still in ethnographic approaches to data collection. Pilot interviews were useful for the present study not only to practice my interview technique but also to “foreshadow research problems and questions”, in highlighting wastage and gaps in data collection, and in considering broader and highly important issues such as research trustworthiness and ethics (Sampson, 2004). In the course of my pilot interviews, I undertook two pilot study interviews, a PhD nursing student at the University of Hull, playing a role and being interviewed as a real seller, and a representative being a second-hand clothing seller. During the process of pilot interviews, I was keen to interview and refine my ethnographic interview in this pilot study. I asked informants to reflect upon the interview and consider any unnecessary elements, as well as to report back on how they had experienced the interview in order to check that the process was not too demanding or invasive.

After finishing the first pilot interview, the recorded audio file of the first representative, a native speaker of English, was sent to both my supervisors, Professor Fiona Cowdell and Professor Kathleen Galvin, as the experts. Then I received some

feedbacks from them to improve my interview techniques. My reflection of the first pilot interview was that the native speaker who is not the actual second-hand clothing seller may not truly understand the context of the sellers, thus, the conversation did not flow as it should be. For the second representative, a real Thai second-hand clothing seller who was not the informants in the study, the recorded audio file was transcribed and translated, as a transcription, before sending to the same experts as mentioned above. After that I had feedback from my both supervisors to develop my interview skills, for example, how to ask the more appropriate questions and how to make the conversation flow. After finishing the both pilot interviews, I revised the feedbacks from my supervisors combined with reviewing the relevant studies to prepare myself for interviewing with the informants.

3.4.2.5 Interviews

The interviews, lasting from 20 minutes to a little over an hour, could gather ethnographic data on resident's biographies and daily experiences in the study setting (Barrows, 2011). Consequently, in this study, during the 6 month period of data collection, I collected 34 tape-recorded interviews, each lasting approximately 36 minutes to a little over an hour. Nevertheless, there was no visible boundary between the two methods. Participant observation and interview were circularly used throughout the period of data collection (O'Reilly, 2005; Roper & Shapira, 2000).

In the field, my interview was cyclic – I had done interviews as I was doing observation – and, also, the interview questions were relevant to my observational data, fieldnotes and fieldwork personal journal. To give an example, when I interviewed one of the informants who sold children's clothes, in the fieldnote I quoted what I noticed.

When she separated the clothes around 50 per cent, she felt itchy at her left eye. Then it was swollen. She told me she sometimes dropped her itchy eye with the eye drop.

And what I recorded in my fieldwork personal journal was:

She did not use personal protective equipment such as eye glasses to

prevent an eye irritation from dust, even though she knew that she had an allergy to dust.

From the above examples, I furthered my interview when the informant said about separating clothes and she complained about her eye irritation. Therefore, I interviewed her with the next questions as appeared in the transcriptions “How long have you been having this problem?”, “How did you do for releasing the irritation?” and “Why don’t you wear eye glasses?”

I also used “descriptive questions” at the beginning phase of an interview. I, for instance, asked an informant, “Could you please tell me the routine of your working day?” or “Could you please describe a typical day at the market(s)/your house?” These questions provide an opportunity for the informant to freely express the story at his or her own pace. I then listened attentively and planned what next question to present and decide whether it should be in the form of a descriptive, structural or contrast question which was uncomplicated and the informants found it easy to talk with me. Anyway, the questions in the interviews were sensitised by HBM theory, in particular, asking about perceived susceptibility of the health risks, for example, “How do you feel when you bend down and look up while hanging clothes?” or “How do you feel when you separate clothes in the dusting area”.

Another example of a descriptive question I used is “How do you feel when you move the pack of clothes?” for gathering the information about perceived susceptibility of the health risk. Following what was given as a reply, I built up my next question(s). When an informant described about experiencing back pain and muscle soreness as an impact of heavy weight lifting and moving goods with the wrong positions, I then asked the next question using more specific question to expand the information explicitly as follows.

“Talking about lifting and moving the bales, you said you often have a back pain and muscle soreness. What is your experience and what would you do if you have those problems?”

Using an open-ended question had shown its benefit rather than closed-ended question. The informant's replies were not just, "Yes, I do" or "No, I don't". It instead described the in-dept and important viewpoint of the informant on working conditions. The following excerpt illustrates the reply concerning an open-ended question:

"I often have a back pain when I lift or carry the heavy goods. Sometimes I have to stop the sale in some days and rest at home. I feel tired from this. When I suffer from a pain I don't want to do anything. It is so bad. I need to avoid lifting or carrying the heavyweight goods. I plan to employ an assistant as soon as possible [laugh], so I need to expand my stall as well. I want him to carry the heavy goods instead me. I think it is better"

Furthermore, for the "contrast questions", one of the informants, for example, complained about rashes on his face and said that "I used to tie a handkerchief as a facemask. But it did not solve the problem. I still felt itchy on my face because the dust could pass through the edge of handkerchief to my face and accumulated on my skin". Therefore, I asked the informant a contrast questions which I applied to expand understanding of the information, for example, "Could you tell me the difference between when you used the handkerchief and didn't use it?" and the following is the reply:

"It's fairly different. When I did not use it [a handkerchief], I sneezed 2-3 times when I opened the sack [a pack of goods]. After that, it's OK. I think because of a fan. It helps me a lot. So, I don't really care much about it. I think a handkerchief couldn't help me prevent rashes on my face because it doesn't cover all of it"

The complementarity between the three different types of questions promoted harmony and smoothed the stream of conversation with informants. Finally, during the 6 month period of data collection, I continually sent the transcriptions translated from Thai to English to my both supervisors and discussed together regarding my interview technique and how to improve. For this reason, my interview technique was improved

over time during the data collection.3.4.2.6 Using é - aide-mémoire as a guideline for data collection.

Being in the field, there was no scripted introduction to be used in the interviews with the 27 ethnographic informants –I adopted the style, phrasing, and tone that were most comfortable for interview. In general, first, I introduced, or re-introduced, myself. I reminded the informant that this was an interview in which he or she had agreed to participate, and that the interview would last up to 1.5 hours. The topics were their beliefs regarding the health risk and risk prevention of their work. I stressed that I was interested in their ideas, opinions, and perspectives, and let them know that I appreciated their help. The topics I listed as the interview guide were as in appendix 4 (é - aide-mémoire).

3.5 Leaving the field

I terminated the data collection after a six-month period of being in the field because the data was already saturated and adequate for data analysis and interpretation. Throughout the period of time spent in the market place, the atmosphere in the stalls and market was comfortable; most informants and other sellers including their families were pleasant and friendly. Consequently, leaving the market and returning to the UK became an emotional time. I exchanged personal contact details, such as mobile phone numbers, with the informants in case I needed to clarify the analysis of the information.

3.6 Data analysis

3.6.1 The introduction of ethnographic analysis

Ethnographic analysis has been defined as “a search for the parts of a culture, the relationships among the parts, and their relationships to the whole”. It is a domain gained from the culture of ethnographers (Spradley, 1980). Researchers could infer the four folk terms of ethnographic analysis, consisting of “domain analysis”, “taxonomic analysis”, “componential analysis” and “theme analysis”, from what

people say (interview data) and do (detailed observation) (Hammersley & Atkinson, 2007; Spradley, 1980). Following the suggestions of Hammersley and Atkinson (2007) and underpinning the process of data analysis, detailed and repeated reading of all data sources, such as observational and interview records, is necessary to make sense of the information and to seek for interesting patterns relevant to the study's focus. It is not enough if the researcher only skims the interview transcripts or fieldnotes to gain a broad sense of "what is all about". After all data were repeatedly read, the data were put into particular categories, so that the mutual relationships and internal structures of the internal categories were more clearly displayed. Similarly, Boyle (1994) revealed that typically, the researcher reads the preliminary data and identifies patterns, trying to comprehend how the data relate to what he or she expected to find, and to identify any inconsistencies or contradictions between accounts provided by informants.

Because the ethnographic method was adopted for the process of data collection of the present study, I then selected ethnographic analysis following the suggestions of Spradley (1980) to analyse the interview and observational data. From the four folk terms of ethnographic analysis mentioned above, I chose to employ only three of them in the present study: domain analysis, taxonomic analysis and theme analysis. I avoided using "componential analysis" because it is set to "clarify the dimensions of contrast between domains". In the present study the two principal domains of *health belief and health behaviour*, were definitely different and could not be compared or contrasted. These were adopted based on the principle of HBM theory as presented in the following section.

3.6.2 Using the HBM to guide ethnographic analysis

At the initial stage, the first kind of ethnographic analysis or "domain analysis" was applied to isolate the fundamental units of cultural knowledge. This step helps researchers to understand "what the informants know" from the information gained (Spradley, 1980). According to the domain analysis, I started with categorising the concepts of HBM and classified them into two different types following from the research aims: first, explore the understanding of second-hand clothing sellers' beliefs about the occupational health risk and risk prevention; and second, examine how this

understanding influences their preventive health behaviours. Consequently, the two different types categorised from the concept of HBM consist of: 1) *Health belief*; and 2) *Health behaviour*.

A number of domains (or categories) were used following from the first three research questions and using HBM as the theoretical framework. After I had identified the main concepts, I then applied “taxonomic analysis” to focus on the internal structure of the selected domains. In this step, the experienced ethnographer prefers to combine domain analysis and taxonomic analysis into a single step; nevertheless, it is best to undertake each kind of ethnographic analysis separately (Spradley, 1980). To determine whether or not my reflective ideas were accurately presented from the perspective of an “insider”, I then went back to the interview transcripts, re-read them, and identified what each informant stated in relation to each point I had recorded. Then I used “theme analysis”, the final step of ethnographic analysis, to consider relationships among the two domains and how these relationships are linked to the overall context of second-hand clothing sellers and their market place. The details of how I analysed the collected data by ethnographic analysis are presented in appendix 5.

3.7 Reflexivity

Reflexivity is referred to as the researchers’ own reactions to the study, their location and position in the study, and the relationships encountered. These are reciprocal (Holloway & Biley, 2011). Reflexivity in the study makes explicit the stance of the researcher, who is the main research instrument (Fetterman, 2010; Holloway & Galvin, 2016). It is a characteristic of the ethnographic imagination and establishes the researcher’s integrity, which is part of good ethnographic practice (Brewer 1994). In this section, I reveal what it means to be a researcher and a worker and how this dual nature was represented in my study and what it means for the data collected. I describe how I experienced the feeling of being an ‘insider’, a second-hand clothing seller, as well as experiencing that of feeling an ‘outsider’, a researcher. I reflect on how such insider and outsider moments were illustrated to me (Arber, 2006; Holloway & Biley, 2011). I discuss the feelings, emotions and tensions that can occur in the researcher when informants attempt to keep to a marginal positioning on the boundary between

the second-hand clothing seller and researcher identities and how this tension was resolved with reference to the lived experience of my research.

I commenced data collection with the sellers who had no experience of participation in research. I was also worried that informants may feel uncomfortable when someone they did not know stayed in their stalls for a few days. Consequently, I initially hovered around the stalls until I felt a level of acceptance of my remaining within this space. From the beginning, I tried to break down any “hierarchies” between myself as the researcher and informants in the study (Burns et al., 2012). Once I had become comfortable interacting with second-hand clothing sellers within their stalls I found myself slipping into “seller” mode, when the boundary between insider and outsider became blurred. The nature of this particular workplace environment, which was often busy, meant that I often felt a strong desire to “help out” (Burns et al., 2012; Morse, 1989; Simmons, 2007). Occasionally I helped the informants with their work in the stalls; for example, putting clothes on hangers, hanging clothes and grouping clothes. During the time in the informants’ stalls, I sometimes felt self-conscious to be an academic rather than a cloth seller. I often worried about what I might do with observational and interview data that portrayed the informants in an unflattering manner, especially when one of the informants withdrew from my study. However, he explained that the reason for withdrawing ~~himself from my study~~ was not because of feeling uncomfortable; it was rather because he was sick and did not have time for interviewing. His wife was willing to be my informant instead her husband. This made me feel better.

Moreover, I sometimes felt uncomfortable when staying in the stall especially when I had finished preparing the clothes for sale and there were no customers buying clothes, as I felt the sellers needed to relax after their hard work. For this reason, I chose to have a break at that time to avoid making them feel uncomfortable. During the data collection, the participant observation and from the field notes, I gathered more data than I had expected as informants in the study gave me a very positive response and took the opportunity to talk to me during my periods of observation. These records allowed a variety of views on the market work to be expressed.

3.8 Summary

Applying multiple methods of data collection of ethnography and the ethnographic approach to data analysis were considered appropriate for the present study. The participant observation was accounted as a major form of the data collection to gain insight, from both insider and outsider perspective of the culture and practices of the second-hand clothing sellers. Alongside participant observation, note taking (fieldnotes/fieldwork) and photographs were kept during the period of data collection. The big four second-hand clothing markets located in Mueang district, Yala province, were selected as a study setting. The data were collected between December 2014 and June 2015, 6 months in total, and 27 ethnographic informants were willing to participate in the study. Finally, the range of methods of data collection as well as the steps of the ethnographic analysis complemented each other, in an attempt to contribute to the trustworthiness and comprehensiveness of the research findings.

Chapter 4: Second-hand clothing sellers' beliefs regarding the occupational health risks and risk prevention

4.1 Introduction

In this chapter I describe the findings of the present study based on the research question “What are the second-hand clothing sellers’ beliefs regarding the occupational risks or risk prevention?” I describe these in the light of the six key concepts of health belief model (HBM). These results are linked to chapter 6 to explain the relationship between the second-hand clothing sellers’ beliefs and their preventive health behaviours. An overview of second-hand clothing sellers’ beliefs is presented as table 5.

Second-hand clothing sellers' beliefs	Themes	Example of interview (from transcription)
Perceived susceptibility of work-related health problems/injuries	<p>Perceived susceptibility of workers who lack of information and experience</p> <ul style="list-style-type: none"> • Work affects only people who have health conditions or limitations (18 informants) • The belief that work does not affect workers and problems are normalised 	<ul style="list-style-type: none"> • I don't have [allergic] symptoms because I don't have allergy [to dust] • If the clothes sellers or customers have allergies to dust, they might have some symptoms such as having sneeze or snot. • I have a little (health) problems such as a little pains and aches of muscle. I think it's the common health problems as people can normally have • I haven't heard that the sellers have illness from clothes

Table 5 An overview of second-hand clothing sellers' beliefs

Second-hand clothing sellers' beliefs	Themes	Example of interview (from transcription)
	<p>Perceived susceptibility of workers having experience and receiving information from others</p> <ul style="list-style-type: none"> All people who are exposed to occupational health risk are likely to receive adverse health problems 	<ul style="list-style-type: none"> If I often lift the heavy goods, I may have Kra duk tab sen [Myositis, Muscle Strain or Polymyositis] I think that lifting goods with a wrong posture may cause this health problem as well.
<p>Perceived severity of the work-related health problem/injuries</p>	<p>Insignificant effects of harm</p> <ul style="list-style-type: none"> Health problems are an inevitable part of that work Infrequency of getting symptoms Level of tolerance Duration and/or level of suffering Simplicity and minimisation of impacts when dealing with problems <p>A matter of great concern</p> <ul style="list-style-type: none"> The high impacts of health problems Duration and/or level of suffering on perceptions 	<ul style="list-style-type: none"> It's normal if the clothes sellers will have muscle ache and back pain from lifting or moving clothes because they cannot avoid this working conditions I have a [back] pain in some days, not every day I can tolerate with it [allergic symptoms] I don't have a big pain or a severe back pain Actually it will be recovered within a short time It will be better if I have a shower and recover [from rashes] very soon I may have a herniated disc. If I have it, I can't get back to normal. I mean that for example I can't walk as I can or I can't walk as a normal posture I couldn't move even taking a breath because of a severe pain. I also was injected with morphine every 4 hours
<p>Perceived benefit of taking action on occupational risk prevention</p>	<p>Individual benefit</p>	<ul style="list-style-type: none"> I think that it's good to use it [mask] because it can prevent germs and dust passing into our body

Table 5 An overview of second-hand clothing sellers' beliefs (continued)

Second-hand clothing sellers' beliefs	Themes	Example of interview (from transcription)
<p>Perceived barrier of taking action on occupational risk prevention</p>	<p>Environmental barriers</p> <ul style="list-style-type: none"> • Discomfort • Inconvenience/ awkwardness • Time consuming • Complication/difficulty <p>Individual barrier</p> <ul style="list-style-type: none"> • feeling strange/shy 	<ul style="list-style-type: none"> • I don't wear mask when I am separating clothes because if I wear it, I will feel "Erd-ard"[uncomfortable] • I will be able to do [changing the chair] but it's inconvenient. I think it's awkward • It's good to pick the clothes with the right position, but for me, I'm too busy to think about it • I don't think much about working postures, it seems complicated • No one wants to use mask, it's so strange. It might be that when others see me, they will gossip me
<p>Perceived self-efficacy of taking action on occupational risk prevention</p>	<p>Feeling confident</p> <p>Feeling unconfident</p>	<ul style="list-style-type: none"> • I definitely want to continue using it [mask]. If I don't wear it, I can't separate clothes • I can't say that I can do this surely [wearing mask] because I really feel unfamiliar with it
<p>Cues to action</p>	<p>Bodily event</p> <p>Environmental events</p>	<ul style="list-style-type: none"> • It [sunlight] affects to my eyes. I will feel irritated in my eyes whenever I face to it • He (a doctor) gave me an advice. He suggested me wearing mask when I am exposed to dust such as when I check a stock

Table 5 An overview of second-hand clothing sellers' beliefs (continued)

4.2 Perceived susceptibility to work-related health problems/injuries

The findings reveal that perception of susceptibility or vulnerability of second-hand clothing sellers depends on their experience as well as information from others. Consequently, in this section, comparing perceived susceptibility between workers who have adequate and inadequate experience and information are presented.

4.2.1 Perceived susceptibility of workers who lack of information and experience

With regard to the interview data, most informants did not obtain an adequate experience themselves by lack of the serious symptoms or lack of illness experience from other peers who work in the same job. Also, lack of information from other peers regarding a particular illness from working conditions influences the sellers' perceived susceptibility of work-related health problems. This limitation convinces the second-hand clothing sellers to codify the health effects of work exposure as following topics.

4.2.1.1 Work affects only people who have health conditions or limitations

Most informants mentioned about dust allergy in the similar opinions as dust exposure from working condition affects only people who have allergy to dust according to research transcripts. Some of which also stated that low immunity is regarded as the cause of dust allergy, i.e., individuals with low immunity will have dust allergy if they are exposed to dust. Consequently, it is normal if the sellers who have low immunity or have dust allergy may have inappropriate reaction or sensitivity presented as symptoms such as sneezing, runny nose, coughing and watery eyes while contacting dust from clothes. While others who do not have dust allergy as health condition will not have symptom or may have only a little symptom if they are exposed to dust.

“...I don't have [allergic] symptoms because I don't have an allergy [to dust]I think it [dust] may stimulate allergies, something like that. It affects an allergic person or one who has the health condition. I think...most of them will have some symptoms like asthma. So, they should use a mask”

[Male, 46 years old, 23 years' experience]

“I think it depends on the individual. If the clothes sellers or customers have allergies to dust, they might have some symptoms such as sneezing or snot. I mean if they face dust. These lead them to feel uncomfortable”

[Female, 35 years old, 9 years’ experience]

Most informants who reported allergies to dust had similar perceptions that the allergic reactions from dust exposure are linked to dust contact; in some cases this was linked to eye symptoms.

“I think dust affects my health. I initially have an allergy as my eyes feel itchy. I think it has an impact on allergic persons. My third daughter has an allergic reaction as well. When I was grading clothes, she can’t stay near the grading area. She was sneezing immediately and snot was running down her nose. So, she has to stay in a separate room. Sometimes she had asthma if she was exposed to a lot of dust” [Female, 39 years old, 18 years’ experience]

The above excerpt demonstrates that a particular work-related health problem may not be of concern to second-hand clothing sellers as long as they have not experienced these themselves. Also, their knowledge is not increased if the information they have gained is inadequate. It means that the quality of information from others affects the workers’ perception of susceptibility and severity of occupational health risk.

4.2.1.2 The belief that work does not affect workers and problems are normalised

As long as second-hand clothing sellers do not have particular symptoms, illness experience or receive information from others, they believe that undesirable effects including accidents/injuries related to work are unlikely to take place, or can occur but some adverse problems are perceived as normal

“For me, I have a few (health) problems such as a few pains and aches of muscles. I think it’s the common health problems people can normally have”

[Male, 37 years old, 10 years’ experience]

“If it has germs in the clothes, the sellers will be infected or have illness. But in fact, I haven’t heard that the sellers have illness from clothes, even though they have been exposed to dust for a long time” and also stated that *“Some might have sold the clothes [without using a mask] for a long time, I mean 20-30 years. They still sell the clothes in the markets without having health problems…….”*
[Female, 35 years old, 9 years’ experience]

The above excerpt means that a common health problem in relation to work may be acceptable in a healthy person. Also, the lack of information influences directly to perceived susceptibility and severity to health problems among second-hand-clothing sellers. Moreover, as long as the person is not exposed to a work-related health risk on an everyday basis, second-hand clothing sellers perceive the work-related health problem as a minor concern. The findings also suggest that long standing experience has a role in determining the perceptions of susceptibility in that long experience of clothes selling does not increase perceptions among the second-hand clothing sellers interviewed. Susceptibility does not change over time with work experience. Additionally observations support these findings as the lack of media and interpersonal communication sharing in the workplace influences the perceived information of the sellers leading to the lack of risk perception as mentioned earlier.

4.2.2 Perceived susceptibility of workers having experience and receiving information from others

There were some informants who had experience with, or had received information from others, about adverse health effects from work. These workers perceived that all people who are exposed to occupational health risk are likely to receive adverse health problems. Most had experienced illness or injury as they had been admitted or treated in a hospital and doctors gave them advice, while the other informants experienced health issues from their co-workers or peers by visiting them at home or in a hospital. With regard to the informants who had experienced the particular illness in their past, there are several health issues indicated by them, for instance, *“Kra duk tab sen”* [herniated disc or *Herniated Nucleus Pulposus*] and *“Klam naer ak seb”* [*Myositis*,

Muscle Strain or Polymyositis] as experienced by informants who had direct experience by admitting or treating in hospitals:

“I was admitted because of Klam naer ak seb. I had a severe pain in my lower back. I remember that time when I bent my back and tried to pick up clothes on the floor. Once I twisted my body, I think it was too much. Then I felt my back and waist was locked and had a severe pain. I then went to the hospital and was admitted. Normal pain injection was not enough, I was injected with Morphine”
[Female, 43 years old, 19 years’ experience]

“Well, at that time, I lifted the heavy goods and put them on my pick-up tray. Then, I felt pain in my back. It’s like a back pain. The doctor told me I have Kra duk tab sen. He suggested to me that I have to avoid heavy weight lifting. It’s so dangerous. I have to be careful about this. I have to be concerned about my spine. I am sure that my health problems were from lifting heavy goods because after I lifted them, I had a back and waist pain. It was a big pain. I felt pain even when I was walking”
[Male, 59 years old, 19 years’ experience]

The above excerpts indicate that personal illness experience such as past illness and present illness play an important role in perceived susceptibility or the chances of contracting a health disease or condition among second-hand clothing sellers. Also, interpersonal trust is also important for sharing knowledge and information: for example, the health professional has a role in providing knowledge/information about work-related health problems that influence the perceptions of susceptibility of the informants.

Moreover, some of these also mentioned other health issues including accident/injuries from their direct experiences,

“I had an accident from hammering, it was when I hit my hand. I recovered just after 2 weeks.....” [Male, 46 years old, 23 years’ experience]

“Once, I didn’t use something to prevent my hand [from touching umbrella poles], I had a splinter wound. I felt pain for several days”

[Male, 30 years old, 9 years’ experience]

The above excerpts suggest that whether the sellers are concerned about work-related injury or not depends on their direct experiences and impact of that work-related injury. Also, personal, direct experience of risk behaviour and negative health outcome influences individual perceptions of chances of getting a condition.

Apart from personal direct experience such as past illness and receiving information from health care providers, some informants mentioned that they perceive unfavourable effects due to working conditions from others such as co-workers, friends or customers through interpersonal information sharing as well as through media. The examples of excerpts about receiving information from interpersonal communication sharing are as follows:

“Well, my friend...he is a seller too. He was admitted to hospital 4 years ago. He had a chest tube inserted for drainage. He was pierced at this area (he pointed at his ribs). I think because he worked at this job for a long time - around 10-20 years. Before he had the problems, he never used a mask. He felt pain in his chest and it was difficult to breathe. When he was admitted, the doctor told him that his lungs have problems but I don’t know what it is called. Also, I don’t know about the treatment. I told you how I noticed and remember it”

[Male, 41 years old, 20 years’ experience]

“I used to visit my friend who was sick with Kra duk tab sen [herniated disc or herniated nucleus pulposus]. He told me that he has the problem because of wrong posture. He kicked a rattan ball with the wrong posture. He suffered from a severe pain and can’t move. I think that lifting goods with the wrong posture may cause this health problem as well”

[Male, 42 years old, 15 years’ experience]

“I never have [a big pain] but my co-worker had. He had severe lower back pain because he moved a bale wrongly. Once he twisted his body while moving

the heavy bale. Then he felt very severe pain at his waist. I brought him to hospital at 11 pm. He has “Klam naer ak seb” [Myositis, Muscle strain or Polymyositis]” [Male, 29 years old, 9 years’ experience]

Furthermore, a few informants held a different experience as their perceptions of susceptibility were influenced by mass media such as television or magazines. They tended not to have experienced health conditions but were aware of, and acted on, health messages from these sources.

“I’m so concerned about asthma or lung disease. I think dust can pass into my lungs. I know that there are a lot of viruses and dust in the air because I used to watch about this from TV. I have to wear a mask to protect myself from dust and viruses” [Male, 42 years old, 16 years’ experience]

“Sometimes, I read a magazine. I found that dust mites are very small. We can see them under a microscope. If they can pass into our body, we can have respiratory diseases. I think it probably has dust mites in the second-hand clothes because it takes a long time for travelling to us. I saw their pictures and felt scared. I think it is better to prevent them”

[Female, 45 years old, 20 years’ experience]

The above excerpts mean that second-hand clothing sellers who do not have experience themselves from work-related health problems may perceive the impact of work on health through mass media because mass media may influence the perception of susceptibility of the workers. Also, sufficient information and communication patterns provided through media are important to increase people’s understanding with regard to the chances of contracting a health disease from their working condition. However, in the context of the second-hand clothing market, mass media information linked to the second-hand clothing sellers’ particular work processes was still not much available and had less influence than the information from interpersonal information sharing.

The results indicated that perceived susceptibility does not change over time with experience and long-standing experience of clothes selling does not increase

perceptions of susceptibility as long as the workers have not had illness experience such as past illness and information about that work-related health problem through media and interpersonal communication sharing. These personal experience and information are related to personal knowledge or understanding with regard to the chances of contracting a health disease from their working conditions. For example, because of personal symptoms (severe muscle pain) as well as information from doctor, a 43-year-old female informant of 18-19 years' experience perceived that second-hand clothing sellers who work with incorrect position may have "*Klam naer ak seb*" [*Myositis, Muscle Strain or Polymyositis*]. Also, due to information from the doctor, she perceived that she will have "*Kra duk tab sen*" [*herniated disc or Herniated Nucleus Pulposus*] if she still often lifts heavy goods. It means that personal experience and information from others may increase individual knowledge or understanding about the occupational exposure and probability of work-related health problem, for instance, that heavy lifting may increase the probability of *Kra duk tab sen*. In contrast, the unawareness of the work impacts of selling clothes (i.e. work affects only people who have health conditions or limitations or the belief that work does not affect workers and problems are normalised) occurs because of second-hand clothing sellers' limited information and knowledge about the health effects and potential harm of work exposures.

Several studies support this result suggesting that perception of susceptibility arises from individual experience (Castonguay et al., 2016; Shahrabani & Benzion, 2012; Woolley et al., 2004) and information (Shahrabani & Benzion, 2012). Shahrabani and Benzion (2012) revealed that a negative experience with illness of the participants themselves and their family members will increase the perceived threats – perceived susceptibility and severity of disease, whereas a positive experience with the vaccine will lower their perceived threats, since individuals may feel more protected after receiving the vaccine and may expect that after getting a vaccine, contracting the disease will be less serious than otherwise. This result was also supported by Castonguay et al. (2016). They concluded that there was an increased presence of perceived susceptibility once the informants began talking about their experience with the treatment for depression. Overall, informants made few references to their susceptibility to depression but focused heavily on the experience of symptoms once

they occurred including their fear of repeatedly experiencing symptoms once treatment was sought.

However, the quality of information is also important as it has a role in determining the second-hand clothing sellers' perception of susceptibility and severity of health risk from working condition, i.e., their knowledge is not increased if the information they have gained is inadequate. For example, although one of informants received information about health risk of second-hand clothes through news from television, she still did not believe that second-hand clothes affect human's health.

“I heard the news that customers buying [second-hand] clothes at Rong-Kler market [Sar-Keaw province] were infected with germs and got skin issues. I'm not concerned about this because I, my family or even my customers don't have this issue. If the news was true, I think...nobody wants to buy second-hand clothes. But in fact, there are a lot of customers go to this market. It doesn't have any impact from the news. So, I think the clothes may not have a big impact to customers, otherwise, there wouldn't be a lot of customers who want to go there” [Female, 35 years old, 9 years' experience]

The above excerpt means that information through media such as television may not increase risk perception of the receiver if the details of information are inadequate and incomplete. In this case, the news did not show a deeply detail about skin problems from second-hand clothes, for example, how the patients got skin issues? Also, the news did not mention about the adverse health effects in relation to second-hand clothing sellers. It means that the information has to be specifically tailored for it to work. Also, it would rather show the health problems and their impacts to the workers especially respiratory and musculoskeletal problems. This is why the informant was not concerned about the work-related health problem even though she already received the information through television.

Consistent with the conclusion of Briones et al. (2012), the majority of the videos provided for health education did not discuss about vulnerability to human papilloma virus (HPV), and thus failed to communicate to informants that HPV is the most common sexually transmitted infection among men and women in the United States.

Nearly half of the videos did not mention the link between HPV and cervical cancer, and thus fell short of relaying that the virus can cause serious health problems. The findings from the present study describe how the information has to be specifically tailored for it to work and link to serious health problems and susceptibility in relation to working process of the sellers. These may have implications for health promotion strategies.

4.3 Perceived severity of the work-related health problem

Continuing from those perceived susceptibility of the health risk explained in the previous section, here the sellers confirmed their experiences of the undesirable effects of health risks on both major and minor concerns. They explained, in their own terms, within the limits of their own understandings how they thought the impact of health risk is not a big deal or, on the other hand, the impact of health risk is a matter of great concern. The following sections illustrate the perceived severity of second-hand clothing sellers categorised into two aspects: insignificant effects of harm and potential harm as a matter of great concern.

4.3.1 Insignificant effects of harm

4.3.1.1 Health risks are an inevitable part of selling second-hand clothes

Most informants admitted that working as second-hand clothing sellers, indeed, certainly exposes them to some work-related health concerns, yet they still said that many of these are only to be expected, or as they usually say, the health issues from work are *Thammada* or *Prokkati* [normal problem/unavoidable/familiarity].

“Thammada” or Prokkati, Thai words defined as “normal problem” were the common words used in the replies from many informants when I asked them regarding perceived seriousness of health problems, for example, “How do you feel when you often bend down?” or How do you think about “Jeb lang” [back pain, lower back pain, muscle ache]?

“I have “Jeb lang” (lower back pain) sometimes. It’s normal for the sellers because we often bend down and look up, it’s not only me having these problems” [Male, 41 years old, 3 years’ experience]

“We can have Jeb Aew [Muscle ache, lower back pain] I mean it could happen to many people, not only us [the second-hand clothing sellers] but also even in people who do not work” [Female, 39 years old, 10 years’ experience]

“Muscle aches and back pain are our normal problems because we have to lift and move heavy goods. Each item is 100 kilogrammes. Some might have lifted it with wrong postures, so they got a [muscle] “Klam naer ak seb” after that. For me, I never have “Klam naer ak seb”. However, I used to have a pain in my scapular. I also have muscle aches and waist pain”

[Male, 33 years old, 1 year’s experience]

“Of course, I have muscle ache, back pain....it normally appears in the sellers. For me it’s normal. Today, I work...tomorrow I will have the pain. After that, it will be gone. Then, I will have it again. So, I think I get used to it”

[Male, 48 years old, 18-19 years’ experience]

The above excerpt means that the impacts from work conditions remain visible, but given that the impacts still do not hinder the ability to continue working, second-hand clothing sellers believe the impact from work is not worth worrying about. Also, the findings show the linkage between the common health problem and the acceptability of that health problem, in which the workers regard the health concern as not worth a thought.

Furthermore, some informants stated clearly regarding the normal problems. They explained that they cannot avoid having these health problems. Also they feel familiar with the issues and they could be patient with the symptoms.

“I think it’s difficult to prevent Jeb lung [back/ lower back pain]. It’s the normal problems of this kind of work as we have to sit for a long time while separating clothes” [Female, 33 years old, 10 years’ experience]

“I have Jeb lung sometimes. It’s normal and can’t be avoided if you work at this job” [Male, 24 years old, 1 year’s experience]

“Of course, I have muscle ache, back pain....it normally appears in the sellers. For me it’s normal. Today, I work...tomorrow I will have the pain. After that, it will be gone. Then, I will have it again. So, I think I get used to it” and he also said “I feel achy if I work in the same position for a long time. But it’s not a big problem. Em. I think I feel familiar with it. I mean achy. It doesn’t mean I can’t do anything if I have achiness. No, it doesn’t like that, just feels achy” [Male, 48 years old, 18 years’ experience]

“I’m familiar and can be patient with it [dust]. I still do not use a mask because I can tolerate it [allergic symptoms]” [Male, 48 years old, 18 years’ experience]

The above excerpts referring to the definition of normal problems from the perspective of second-hand clothing sellers reveal that as long as they work, they cannot avoid health problems which are an inevitable part of that work, and the health issues are accepted as there is no other way to deal with them. Also, familiarity of contacting health risks develops in the situation where individuals are repeatedly exposed to the same hazards. Moreover, the undesirable effects also seem to become important when they prevent an occupational barrier, being able to continue with the job or particular work processes. This may have implications for how health promotion is to be framed.

4.3.1.2 Infrequency of getting symptoms

A small number of second-hand clothing sellers connected the severity of the health risks from a particular working condition with the frequency of encountering the health threats. The sellers appeared to suggest that health problems are not a significant matter as long as the issues happen infrequently and the workers are not exposed to them on a daily basis.

“I have a [back] pain some days, not every day. So, it’s not a serious problem for me” [Female, 45 years old, 7-8 years’ experience]

“I have eye irritation sometimes, not all the time. So, I think it’s not a serious problem and I have muscle ache and nose irritation but not much and I only have it sometimes” [Female, 39 years old, 19 years’ experience]

“I think that itches and rashes are not big problems. When I just open the bale, I feel itchy. I suffer from this just for a few days. When I don’t open the sack I don’t have any rash as well. So I don’t think much about this” [Male, 33 years old, 1 year’s experience]

The above statements mean that frequency of getting symptoms influences the perceptions of severity of second-hand clothing sellers. For this reason, work-related health problems which happen infrequently or once in a while are perceived as being of little concern by the sellers.

4.3.1.3 Duration and/or level of suffering

Some informants mentioned duration and/or level of suffering as the effects of an incident do not take long to disappear as well as they do not have much suffering from the health issues. These become the apparent reasons of minor impacts from work-related health problems.

“Em. I forgot to think about it [bends down and looked up], but I don’t have a big pain or a severe back pain” [Female, 33 years old, 4 years’ experience]

“I never have a severe [back] pain, no need to take a pill or have a massage, because actually, I don’t have much pain”
[Female, 46 years old, 20 years’ experience]

“I sometimes have muscle aches when I sit for a long time but it is not a big problem. Actually it will be recovered within a short time”
[Female, 38 years old, 13 years’ experience]

“It’s not much [pain] and I have not had it for a long time” and “[From an accident] I used to have just a little wound and bruise. I think it’s not a big issue because the symptom was recovered from within 2-3 days. I could work normally. I also didn’t have much pain”

[Male, 29 years old, 10 years’ experience]

The above excerpts show that a second-hand clothing seller who is no longer suffering from work-related health problems and has a low level of suffering perceives that the adverse work-related health problems are mostly of minor significance. Also, because most informants who mentioned about insignificant health problem related to duration/level of suffering are quite young, aging and duration/level of suffering from work-related health problems are interrelated. In addition, this is all more complicated that knowledge and knowing about risk because when an individual perceives that the health problem are mostly of unimportance, s/he takes no action in trying to find out whether the health risk is actually affecting their health or not.

4.3.1.5 Simplicity and minimisation of impacts when dealing with problems

Most second-hand clothing sellers observed that work in the clothing markets causes various kinds of health issues, for instance, allergic reactions, muscle pain, back pain, eye strain. However, they stressed that these are not the big problems as they can deal with the health issues: then they will recover from the symptoms very soon.

“My oldest son massaged me simply by treading and stepping with his feet. I recovered very soon. Sometimes I painted the muscle with the muscle pain relieving oil. It helped me recover as well” [Female, 39 years old, 18 years’ experience]

“Actually, I don’t have muscle ache while I am working. I have it at night, after I finish my work. Then, I will be better by doing nothing”

[Male, 25 years old, 4 years’ experience]

“As you know, I feel itchy every time when I am separating clothes but it is not a big problem. It will be better if I have a shower and recover [from rashes] very soon. Normally, I have a shower every day. So, I choose to have a shower to solve this problem” [Male, 33 years old, 1 year’s experience]

“During the time I have worked in this job [8-9 years], I didn’t have the big [health] issues, just small problems sometimes. If I have a cold, I can buy medicine from the drug store and will get well soon. If I have muscle ache, I can massage myself or my mother can massage me. Or I need to stop for a while and have a rest. Then I will feel better”

[Female, 35 years old, 8-9 years’ experience]

The above excerpts demonstrate that ‘normal (health) problem’ refers to the situations that the sellers have the opportunity to confront in their routine of daily life. This situation was also accepted as the second-hand clothing sellers could not avoid confrontation with in their daily lives. Since the sellers have developed the sense of “normal problem”, coupled with “the undesirable effects happen infrequently and are mostly of minor significance” and “simplicity and minimisation of impacts when dealing with problems”, the second-hand clothing sellers, then, are accepted and discontinue looking at the health concerns. Also, they do not believe the adverse health issues are of importance. This is because of their limited information and knowledge about the potential impact of work exposures to their health.

4.3.2 A matter of great concern

4.3.2.1 The high impacts of health risks

Here, an experience regarding the high impacts of the adverse work-related health problems, a cause of death and disability as well as admission to hospital become the apparent reasons influencing second-hand clothing sellers’ perception about health problems or injuries to be very concerned.

First, a cause of death, some informants mentioned about their points of view understanding the high severity of the health risk as it could be the cause of death.

Most of these, who are the pick-up truck drivers, indicated that car accidents can be the cause of death if the drivers are not aware of protecting themselves while driving according to their experiences. These informants had direct experience themselves as they had witnessed fatal accidents as well as indirect experience through media such as news. Accordingly, their perceptions are built up from either or both indirect and/or direct experience of the accident.

“I used to experience [car] accidents a long time ago. I saw that someone fell from a car and was dead. It was a collision between the two cars. The guy did not wear a seat belt. At that time, I didn’t have a car yet. When I bought my car and owned it, I have intended to wear a seat belt all the time while driving the car because I have fear of an accident” [Male, 46 years old, 23 years’ experience]

“Well, I am concerned about accidents when I have to travel for a long journey. One pack of goods is really heavy. You know, it is 100 kilogrammes. If you pick 6 packs, the total weight will be 600 kilogrammes. It can lead to an accident as the goods are so heavy. Well, dust is so dangerous but it will accumulate slowly in bodies. So it seems like dust is not dangerous as it is. While we can see a danger of accidents by ourselves or through the media, it’s so terrible. Last time I heard the news from TV. The car collided with a power pole and a crash led to a car fire. I am so scared about it. So, I have to wear a seatbelt every time when I travel for a long distance” [Female, 38 years old, 15 years’ experience]

“I’m concerned about [car] accidents because I have to go to the market very early. It is so dark at that time. The crooked road is so dangerous especially at the Lamplai road. Some of my friends were killed on this road”
[Male, 59 years old, 18-19 years’ experience]

While a small number of informants perceived that the health threats could be fatal through information from fellow second-hand clothing sellers.

“It’s dangerous [from cutting wires wrapped around the bales]. It can cause accidents, wounds even tetanus. I have to be careful because it [wires] has rust....Even though I never had an accident but if I had it, it’s a big problem

because I am concerned about tetanus, I heard that [learning from the study lessons] it's the cause of death" [Male, 29 years old, 9 years' experience]

"She [my customer] often came to my shop. I noticed that she wore a mask all the time. Her daughter is a nurse. Her daughter often came with her for buying clothes. She told me that her neighbour who was a tailor died because of dust. She did a job as a tailor. I mean she tailored the new clothes. She inhaled clothing dust. It was accumulated in her body. Then she had a cough all the time. Finally, she was dead. I then initially thought about it because I already have a fear" [Female, 45 years old, 7-8 years' experience]

Second, a cause of disability, only one informant, mentioned herniated disc causing disability leading to a matter of great concern.

".....He [a doctor] also told me that if I often lift the heavy goods, I may have a herniated disc. If I have it, I will suffer from a severe pain and need to have surgery. He also told me that if I have surgery, I can't get back to normal. I mean that, for example, I can't walk as I can now or I can't walk with a normal posture. He told me that because "herniated disc" is relevant to a nerve. I am so concerned about this" [Female, 43 years old, 18-19 years' experience]

Third, admission to a hospital: another high impact of health risk is when workers have to be admitted to a hospital. According to the interview transcripts:

"I think it [Klam naer ak seb] was a big problem because I needed to be admitted to hospital for 5 days....."
[Female, 43 years old, 18-19 years' experience]

"Herniated disc caused a big impact to my health because I had to be admitted to hospital for a few days and needed treatment for around 6 months. You know, the health issue is relevant to my spine. It's about lumbers. This caused a big [health] problem for me" [Male, 59 years old, 20 years' experience]

Moreover, a short-standing informant also shared his experience. He stated that his friend had a severe health problem because he had to bring him to hospital urgently at nearly midnight.

“I never had [a big pain] but my co-worker did. He had the severe lower back pain because he moved a bale wrongly . Once, he twisted his body while moving the heavy bale. Then he felt severe pain at his waist. I brought him to hospital at 11 pm. He has “Klam naer ak seb” [Myositis, Muscle strain or Polymyositis]”
[Male, 29 years old, 9 years’ experience]

The above excerpt means that whether the second-hand clothing seller is concerned about the impact of their work or not depends on the individual’s direct experiences of adverse health effects. The more an individual experiences a high impact from a health risk, the more s/he perceives the severity of that health risk. Moreover, reference to fellow second-hand clothing sellers (i.e., indirect experience/word of mouth) is of note in comparison, information from mass media regarding the likelihood of getting a work-related health problem and its impact leads second-hand clothing sellers to be concerned about the work-related health problem and its undesirable impact. It seems that personal indirect experience is highly impactful and this may have implications for health promotion strategies.

4.3.2.2 The influence of duration and/or level of suffering on perceptions

Here, the duration and/or level of suffering of an adverse occupational health problem becomes an apparent factor influencing second-hand clothing sellers’ perception about which impacts are to be concerned about and which ones are not. For this reason, duration and/or level of suffering could lead the workers to perceive in both aspects, i.e., insignificant effect of harm and a matter of great concern. With regard to a matter of great concern, suffering from some symptoms, such as asthma and severe pain, is also a big health issue as revealed by some long-standing informants.

“.....You know I really suffer because of the asthmatic symptoms whenever I have asthma. It’s so horrible” [Female, 38 years old, 13 years’ experience]

“I am concerned about “Kai sen”. It’s the biggest problem I’ve ever had. I had to stop work for a few days because of fever and especially a severe muscle pain throughout my body which made me suffer so much. I think because I worked hard all day. I also lifted too many goods and I smoked as well”

[Male, 42 years old, 15-16 years’ experience]

“...I used to have a severe pain in my lower back. I suffered a lot. I remember that at the time I bent my back and tried to pick up clothes from the floor. Once I twisted my body, I think it was too much. Then I felt my back and waist was locked and had a severe pain. I then went to the hospital and was admitted. Normal pain injection was not enough, so I was injected with morphine. I couldn’t move even taking a breath because of a severe pain. I also was injected with morphine every 4 hours” [Female, 43 years old, 18-19 years’ experience]

“As I told you, I will have some symptoms like having a tight chest and breathlessness if I am separating clothes without a mask. I think that the problem is from my lungs. I’m really concerned about these symptoms because I think I could be suffering from lung disease as my friend did. I think that I am getting older. If we are getting older, we are weaker, so it’s possible to have diseases we don’t expect” [Male, 41 years old, 20 years’ experience]

Moreover, a short-standing informant, an assistant of a wholesaler, explained that nose irritation is not a big problem unless the symptom takes a long time to disappear.

“It [nose irritation] is not a big problem as I feel uncomfortable for just a short time. But if I have it for several hours, I think it can be a big problem”

[Male, 24 years old, 1-2 years’ experience]

This is associated with the level of tolerance of second-hand clothing sellers as illustrated by a short-standing informant who, for instance, connected the great concern regarding work-related health problem with the level of tolerance of the health issue.

“I used to lift the heavy goods and had a back pain. It was a severe pain, I had to have massage. So, I made a decision to hire assistants. They could lift the heavy goods instead of me. I noticed that some couldn’t cope with the back pain as well as muscle pain. They can’t do further work because of the pain. So, they need to have massages until they get well or I hire another assistant”

[Male, 41 years old, 3 years’ experience]

The previous excerpts reveal that clinical and medical consequences (e.g., death, disability, and pain) are the major causes influencing weightiness of the concerns of the informants. It means that the situation where a concern is perceived as minor would be changed whenever the informants perceive the higher impacts of work-related health problems which affect their daily routine on an everyday basis. The reason is that these high impacts of work-related health problems, a cause of death and disability, admission to hospital and severe pain, are serious enough to cause concern as these would make them suffer and affect the daily routines of these workers. These consequences may also have social consequences such as lost work time or medical expenses.

In conclusion, the severity or seriousness of an undesirable health problem becomes the apparent factor influencing second-hand clothing sellers’ decisions about which effects are to be concerned about and which ones are not. The levels of impact of work-related health problems are significant to the possibility of taking action to minimise a health concern (Gao et al., 2000). Informants who perceived the impact as “insignificant effects of harm” – low impact perception – would also take no action to protect and promote health, which would include not taking any proactive approach to minimise the occurrence of the problems. In contrast, informants who perceived the impact as “a matter of great concern” – high impact perception – would take action to minimise a health concern. The details of relationship between the level of perceived severity and preventive health behaviours are described in chapter 5, topic 5.3: relationships between second-hand clothing sellers’ beliefs and their preventive health behaviours. The findings also conclude that whether the second-hand clothing sellers are concerned about the impact of work-related health problem or not depends on the their direct experiences (i.e., illness experience) and information through interpersonal information sharing and this is of note compared to information

acquired from the mass media with regard to the work-related health problem and its undesirable impact. The lack of awareness of severity of work-related health problems (i.e. the belief that the impact of health issues is insignificant) occurs because of second-hand clothing sellers' limited knowledge about the severity of health problems and potential harm of work exposures.

Both individual experience and information are also related to individual knowledge or understanding with regard to the impact of a disease from their working conditions. For example, because of personal symptoms such as severe muscle pain, as well as information from her doctor, a 43-year-old female informant of 18-19 years' experience perceived that the impact of "*Klam naer ak seb*" [*Myositis, Muscle Strain or Polymyositis*] is high as she had been admitted to hospital for several days. Also, because of information from the doctor, she perceived that she will have "*Kra duk tab sen*" [*herniated disc or Herniated Nucleus Pulposus*] and the disease may cause disability. For these reasons, she was concerned about the impact of "*Klam naer ak seb*" and perceived the disease as "a matter of great concern". It means that personal experience and information from others may increase individual knowledge or understanding about the impact of work-related health problems. In addition, the limits of mass media for second-hand clothing sellers seem to be an important factor affecting the workers' perceptions of the severity of occupational health problems, as is the significance that information from others seems to carry.

Several studies support this result. The relevant studies show that perception of severity arises from individual experience (Rees et al., 2001; Shahrabani & Benzion, 2012; Woolley et al., 2004) and information (Shahrabani & Benzion, 2012). Rees et al. (2001) stated that women with the same objective family history may have developed different beliefs regarding their perceived susceptibility to breast cancer, the perceived severity of the illness and its consequences, depending on their personal experiences. Consequently, there are strong practical and theoretical reasons for believing that women's experiences of breast cancer in their family will influence how they feel about their own risk. Consistent with the findings of Woolley et al. (2004), an individual's experience with disease proves their attitudes regarding personal susceptibility, and the seriousness and treatability of the disease.

4.4 Perceived benefits of taking action on occupational risk prevention

4.4.1 Individual benefit

Most second-hand clothing sellers perceived the benefits of preventive health behaviour as risk prevention is seen as the way to prevent themselves from health threats through several sources of interpersonal information-sharing especially from health professionals, fellow second-hand clothing sellers and customers. However, information through mass media such as TV is not much available particularly for second-hand clothing sellers.

“I feel quite different between separating clothes with and without a mask. I will have some symptoms such as sneezing, snot and so on if I don't use a mask. In contrast, I do not have any symptoms when I use a mask”

[Female, 30 years old, 8 years' experience]

“After I have a severe pain, I then have tried to change my posture. Actually, I changed my posture after finishing separating the clothes in each bale. Previously, I changed [my postures] every 2 bales or after more than 2 hours, now I try to change in every 1-2 hours. Since I have used this method, I then feel better. It's working” [Female, 38 years old, 13 years' experience]

“When I am separating clothes, actually I prefer to use two different sizes of chair, not just only one size. Previously, I used only one size and often bent my back down for picking clothes up from the lower area. So, I had a back pain. Then I think to myself that I have to use two sizes of chairs. After I tried, I felt better, it's working. So I have used the different size of chairs since then”

[Male, 29 years old, 9 years' experience]

“...I also used to see someone who wore a seat belt. The car flipped over several times but he was OK. I noticed that he wore a seat belt. He did not have

injury or even a scratch I think that his body was fixed to the car seat because he wore a seat belt. So, I really intend to wear it every time I drive a car even for a short distance” [Male, 46 years old, 23 years’ experience]

The above excerpts mean that individuals having direct and indirect experiences regarding the advantages of preventive health behaviours understand why the positive behaviour is crucial for them. Also, since individuals perceive the impact of work-related health problems, they then seek the way to protect themselves from the health problems and that the benefits of taking action to prevent the health problems are recognised.

4.4.2 Health care benefits

Health care benefits are defined as “the value of the human health benefits gained from public health programmes would include all costs to society, including medical costs, work-related costs, educational costs, the cost of support services required by medical conditions and/or the willingness of individuals to pay to avoid the health risks” (Lee et al., 2012). Hillestad et al. (2005) explained that disease prevention and management can reduce acute care and change the incidence of chronic conditions including their complications. Also, it could eventually double those savings while increasing health and other social benefits. Nevertheless, this is unlikely to be achieved without related changes to the health care system (Hillestad et al., 2005). The findings show that none of the second-hand clothing sellers appeared to link the benefits of taking action to any aspects of health care benefits. This may be because almost all informants in the study who receive moderate-to-high income normally preferred to seek care from private health care or take other remedies for which the services are more expensive rather than receiving medical attention from public health institutes. Consistent with the findings of Moreno-Serra and Smith (2012), studying universal health coverage and population health, poorer people rely more on government spending for staying healthy than do better-off people, who can more readily substitute private for public health spending.

In conclusion, as Janz and Becker (1984) showed that perceived benefits was the informant’s extent of agreement with statements regarding the potential benefits of

various preventive health behaviours, for example, daily exercise, eating fruit daily and dental check-ups. It was hypothesised that this depended upon beliefs regarding the effectiveness of the various actions available in reducing the disease threat (Janz & Becker, 1984). Strecher et al. (1986) explained that the perceived benefit of taking actions and the perceived susceptibility to a particular illness could both be considered expectations of outcome. These expectations may play the largest role in influencing initial motivation and decision to change a health practice. According to the studies combining the HBM and qualitative methods, most studies indicate that perception of benefits is the personal perceptions on the effectiveness and positive consequences when adopting a new behaviour to reduce the risk of illness or the severity of its consequences (Beer et al., 2012; Downing-Matibag & Geisinger, 2009; Efstathiou et al., 2011; Smith, 2012; Waite & Killian, 2008).

The findings of the present study illuminate the importance of perceived benefits in context, through direct and indirect experiences. As expected, the findings illustrate that the potential benefits in reducing susceptibility and/or severity from work-related health problems will not be considered if the second-hand clothing seller does not have risk perception. It means that they could not mention the advantages of preventive health behaviours if they did not have the perception of health threats, i.e., the vulnerability and severity of those health issues. For example, when a 45-year-old male informant of 6-7 years' experience acknowledged that inhaling dust from clothes may cause respiratory disease, he then sought the way to prevent himself from dust exposure and found that using mask is appropriate, as the method is not difficult and the price is acceptable. For these reasons, he made the decision to use a mask since then. As well, a 59-year-old male informant of 20 years' experience perceived that he might be more susceptible to disc herniation if he lifts items manually beyond his ability or with the incorrect positions. In the meantime, he needed to protect himself from the health problem and that the benefits of hiring an assistant to lift heavy items in his place are recognised.

As in the statement explained by Moonie (2007), "perception of the benefits of taking action towards dealing with an illness is the next step to expect after an individual has accepted the susceptibility to a disease and recognised it is serious". Consistent with the study of Waite and Killian (2008), who combined HBM and focus group

interviews to investigate health beliefs about depression among African American women, when depression was acknowledged and interpreted in relation to its severity, informants in the study then agreed that there were variations related to the modes of treatment to treat patient with depression that were appropriate and acceptable (i.e., the perceived benefits of treating depression).

4.5 Perceived barriers of taking action on occupational risk prevention

4.5.1 Environmental barriers

4.5.1.1 Discomfort

The terms, *Erd-ard*, *Hai-jai-mai-sa-duak* and “*Mai-sabai*, Thai words, were used interchangeably by the informants to refer to feeling “physical discomfort” or “physically uncomfortable”. These terms were primarily used to express the negative feeling related to preventive health behaviours especially for using masks.

“I don’t have much tolerance to wear it for a long time continuously. It’s good to wear it for our health because dust won’t be passed into our bodies. But I feel so Erd-ard and Hai-jai-mai-sa-duak [uncomfortable]”

[Female, 39 years old, 10 years’ experience]

“When I tried using a mask at the beginning, I felt very uncomfortable such as I felt sweaty and hot. I think that it’s normal for the first time because I wasn’t familiar with it” [Female, 45 years old, 7-8 years’ experience]

“I try to wear a mask every time when I separate clothes but I can only wear it for a short time such as around 5-10 minutes. Then I have to take it off because I really feel uncomfortable [breathlessness and tight chest]”

[Female, 38 years old, 15 years’ experience]

“I used to try wearing a mask. I think it was good to wear it because it can prevent diseases. But when I wore it, I felt so uncomfortable. So, I mostly do not wear it. Moreover, I have to spend a long time grading clothes. So, I can’t wear a mask for 2-3 hours continually. I used to try to wear it but finally, I had to take it off when I graded the clothes for around 50 per cent of the time because I felt really uncomfortable. Now I have given up”

[Female, 39 years old, 18-19 years’ experience]

The above excerpts suggest that feeling discomfort has a major negative effect on the ability to work of second-hand clothing sellers. It seems as if this is one of the most significant barriers influencing the sellers’ decision to take the initiative to protect themselves from potential health risks in relation to their work, underlining that the most impactful features are only those where they present real barriers to carrying on as usual.

4.5.1.2 Inconvenience/ awkwardness

Kae-kah or *Mai-saduak*, both Thai words, refer to undesirable feelings like inconvenience or awkwardness. Most informants mentioned these terms as barriers to preventive health behaviour for several working conditions.

“It’s Kae-kah [awkward] for doing it this way [putting bag on a chair before hanging clothes]. It doesn’t have enough space for putting a chair because there are a lot of clothing bags put on the floor”

[Male, 28 years old, 3 years’ experience]

“It’s inconvenient to use a mask while working because it is difficult to do activities such as smoking or talking with others” [Male, 29 years old, 9 years’ experience]

“... In fact, I will be able to do [changing the chair] but it’s inconvenient. I think it’s awkward”. [Female, 26 years old, 2 years’ experience]

The above excerpts mean that inconvenience or awkwardness is a significant barrier influencing the second-hand clothing sellers’ decision to protect and promote health.

Although this barrier affects their well-being (e.g. physical, psychological and emotional) less significantly than feeling discomfort, inconvenience or awkwardness is also a principal reason of their negative work behaviour.

4.5.1.4 Lack of time

Lack of time is one of the major causes of negative behaviours of some informants. This barrier was described widely in folk terms as “*Yung*” (busy) “*Mai-me-way-lar*” (lack of time) or “*Mai-wang*” (no time) according to the research transcripts. These terms refer to busy situations where the informants could not arrange the time for unimportant activities.

“Actually, I have to separate a lot of goods, around 400-500 items. It is time-consuming. Sometime I separated clothes for a long time until I felt numb. After that I had to stand up and walk about for a break”

[Male, 59 years old, 18-19 years’ experience]

“It wastes time [if I put a bag on the chair before hanging clothes] because I am in a hurry. I need to open my stall for selling as fast as possible. If I do it like that, I will finish preparing my stall slowly and will open my stall late” and also said “Sometimes I did [kneeling on his knees] when I picked up clothes. However, normally I have to pick up a lot of bags. So, I am in a hurry and don’t think about this much” [Male, 48 years old, 18 years’ experience]

“Em...Actually, I sat on only the one size chair while separating clothes. I’m not familiar with changing chairs. In fact, I can change it but it’s inconvenient. I think it’s awkward. I’m also in a hurry and want to finish my work as fast as possible. I think it’s appropriate for the fat sellers. They might find it difficult to bend down for picking clothes up from the floor, so they have to use the chair” [Female, 30 years old, 8 years’ experience]

“I can’t avoid prolonged sitting. I am in a hurry whenever I go to Su-ngai Kolok for separating and selecting clothes because I have limited time for working.

Otherwise, I can't get back to Yala in time [travelling by train]" [Female, 38 years old, 15 years' experience

The above excerpts mean that preventing themselves from some adverse health effects particularly musculoskeletal problems is time-consuming for second-hand clothing sellers. However, because of the limited time for selling clothes in the markets, they have to work against the clock as they depend on their day-to-day income. For this reason, lack of time which recognised as one of the major barriers is accepted because of the nature of the sellers' everyday life.

4.5.1.5 Financial cost

Some actions that second-hand clothing sellers took to prevent themselves from the adverse health outcome were costly, particularly buying masks and hiring assistants as described by a few informants.

"... Now, a mask is so necessary for me. Actually, I buy 12 items at one time with 90 baht [£1.80]. If I buy just 1 item, I have to pay 10 baht [20 pence]. So, it is cheaper to buy a dozen items" [Male, 45 years old, 6-7 years' experience]

"Because lifting goods is beyond my ability as I have a herniated disc as my health condition, I have thus hired an assistant to help me lifting goods. This is the reason why I have to pay 200 baht (£4) to my assistant for working 3 hours " [Male, 59 years old, 20 years' experience]

The above excerpts mean that because the cost of mask is not expensive, the sellers are able to pay with small amounts. Thus purchasing masks is not a big burden of the buyers. While some kinds of work were beyond their ability, the sellers' determination to continue everyday work activities was the main motivation for hiring another assistant to help on the stalls rather than concern about the occupational health risk. This solution is beneficial for the sellers as hiring an assistant was worth the small sum of money paid to the helper when balanced against the capability to continue working on their everyday work activities. For these reasons, extra effort or cost is not a major barrier and acceptable because of the nature of the sellers' everyday life.

4.5.2 Individual barrier

A few informants were concerned regarding their image while using personal protective equipment and this is an additional reason why they do not use the equipment to prevent health risks.

“I think it’s so strange. Very few sellers wear sunglasses. All of them are men. I think women (sellers) rarely wear them while working”

[Female, 39 years old, 18-19 years’ experience]

“I have sore and watery eyes sometimes when my eyes are exposed to strong sunlight. I don’t use sunglasses because I am concerned that others might think I am pretentious. I feel shy and awkward wearing them”

[Male, 46 years old, 23 years’ experience]

“No one wants to use a mask, it’s so strange. It might be that when others see me, they will gossip about me. I feel strange using it. Also, the customers probably say if you are concerned with hygiene like this, you should sell [the new clothes] at a department store” and “If the sellers use a mask when they sell the clothes, the customers might be afraid. They may think about why they need to buy second-hand clothes if even the sellers are afraid of their clothes”

[Male, 37 years old, 10 years’ experience]

In conclusion, the findings illustrate that the perceived barriers of the informants involve two main factors: environmental barriers and individual barriers. As Patel et al. (2001) stated, environmental barriers typically do not afford the individual the option to control or minimise external forces while individual barriers are triggered only after the individual is present in the target environment because he or she is cognitively and emotionally internalising the environmental realities. These barriers are hypothesised to be mutually exclusive as well as additive in their effects. Environmental barriers are external or uncontrollable realities that act as objective constraints against health-related behavioural change and individual barriers are internally perceived cues that prevent engagement of healthy actions (Patel et al.,

2001). In this study, the most common barriers cited by informants were discomfort, inconvenience and issues that were time-consuming. Consistent with the study regarding the combination of HBM and qualitative study in table 4, several studies show that discomfort was the main barrier interrupting preventive their informants' health behaviour (Beer et al., 2012; Efstathiou et al., 2011; Patel et al., 2001). Beer et al. (2000) stated the discomfort of sleeping under a net during the hot season was the major barrier to consistent bed-net usage. Similarly, Efstathiou et al. (2011) pointed out that patients' discomfort was the important barrier influencing nurses' compliance with standard precaution, as patients may experience anxiety, distress, or even sorrow when a nurse who has covered himself or herself with personal protective equipment such as mask, gown or gloves offers nursing care. Also, various studies show that lack of time to perform health prevention (James et al., 2012) and economic issues played a crucial role in their decision not to protect themselves with personal protective equipment as purchasing the equipment was seen as unaffordable (Beer et al., 2012; Patel et al., 2001; Waite, 2008).

Notably, all of the most common barriers in the present study – discomfort, inconvenience and lack of time – are external or environmental barriers which are difficult to control. Also, lack of time and financial cost are recognised as barriers of taking action but are accepted because of the nature of the sellers' everyday life. Consistent with the study of Korhakangas et al. (2009) and Manaf (2013), external barriers refer to the factors beyond an individual control, while internal barriers are factors determined by an individual's personal decisions.

However, there are some differences of perspectives between the two studies. Manaf (2013) referred to 'not enough time' as one of the most common external barriers to participation in physical activity and exercise among middle-aged informants while Korhakangas et al. (2009) referred to "lack of time" from work or home duties as one of the internal barriers to regular exercise among adults at high risk or diagnosed with type 2 diabetes. Korhakangas et al. (2009) stated that due to internal barriers such as lack of time including emotions such as shame which could be influenced by the individual's own decision-making, the individual perceives that the reasons, goals and benefits of exercise are insufficient compared to the costs of exercising (pain, tiredness, feeling that exercise is uncomfortable, negative emotions), whereas Manaf

(2013) explained that insufficient time is identified as an external barrier because this barrier is beyond an individual's control. In the current study, lack of time is identified as an external barrier because second-hand clothing sellers have limited time for selling clothes in the markets. They have to work against the clock as they depend on their day-to-day income. Thus this is beyond the sellers' control.

Moreover, there are some relevant studies supporting the idea that personal experience may increase individual perception of benefits outweighing barriers. For instance, Shahrabani and Benzion (2012) explained that those who took the flu vaccine in the last 5 years perceived higher levels of benefits from the vaccine and lower barriers to getting the vaccine. This may be because of a "positive self-experience with the vaccine" (e.g., individuals did not have significant side effects from the vaccine and were not infected after they took the vaccine). This positive self-experience helps individuals appreciate the benefits of vaccination, and in addition lowers their perceived barriers to receiving it (such as reducing their concerns about side effects). Consistent with the study of Bond and Nolan (2011), some immunisers related incidents of relatives who had had bad experiences after receiving a flu injection. These immunisers also perceived the high risk of the flu vaccine and little benefits from the vaccine. As might be expected it can be concluded that the context of this present study reflects well-established ideas in the literature, that personal experience about benefits of taking action may increase individual perception of benefits and decrease perception of barriers, but personal experience or vicarious experience through others well known to participants is very important. This opens up the issues of ability, capacity and self-confidence.

4.6 Perceived self-efficacy of taking action on occupational risk prevention

Following the suggestion of Heidi et al. (2010), we can measure an individual's confidence from ideas and content, voice and tone and word choice as well as the recommendation from Pajares (2010), informant who said "*can*" seems to have a confidence to perform healthy behaviour rather than informant who said "*will*". In the present study, a person who is confident or not was judged to have self-efficacy

through his or her words (idea and content) and tone of voice to express the statement of intention to protect him or herself from occupational health problems, considering the difference between high perceived self-efficacy (i.e., feeling confident) and low perceived self-efficacy (i.e., feeling unconfident) is based on the transcripts and observational data during the interviews.

4.6.1 Feeling confident

Some data demonstrates confidence regarding the second-hand clothing sellers' ability to perform positive behaviours on a normal and long-term basis, in particular, "*I can [take an action]*", "*I'm sure [to take an action]*", "*I have to [take an action]*" and "*I can't stop [taking an action]*"

"I definitely want to continue using it [mask]. If I don't wear it, I can't separate clothes" [Female, 38 years old, 13 years' experience]

"I think because I have an allergy to dust. If I'm not exposed to it, I don't have any symptoms. I'm sure that it's from dust. If I avoid contact with dust or protect myself from dust, I won't have any problems. I noticed that when I don't separate clothes or I use a mask to prevent dust, I don't have any symptoms. So, I have to avoid exposure to dust because I have an allergy to it"

[Male, 24 years old, 1 year's experience]

"I can say that hat and sunglasses are necessary for me and I don't want to work without them" [Male, 48 years old, 18 years' experience]

"I can say that I have to use it [mask] all the time and cannot stop using it because I want to protect myself [from dust] as much as possible"

[Female, 38 years old, 13 years' experience]

"If we intend to prevent it [health problems], we should neither say we forgot the mask nor have other reasons to avoid using it. For me, before I go to the market for selecting clothes, the first thing that I never forget is preparing my mask. If the masks have run out, I have to either buy new items at a drug store

or use a scarf instead. I don't want to work without a mask. If I don't have it [mask], it seems like I am missing something" [Male, 45 years old, 6-7 years' experience]

"If I don't use it [mask], I will have some symptoms. So, I have to use it. I can say that I can't stop using it if I want to do this job because it is really crucial for me" [Male, 41 years old, 20 years' experience]

The above excerpts reveal that feeling confident to behave positively is related to individual intention to achieve risk prevention and control. The statements of individuals with high self-efficacy also mentioned the necessity of taking action related to perception of benefits.

4.6.2 Feeling unconfident

Conversely, other data suggests a lack of confidence as it could not confirm the probability of taking action on preventive health behaviours at the present time or in the future, for instance *"I'm not sure..", "I don't think about it"* or *"Maybe..."*

"I will use a mask if I start sneezing. I think in the future I may use it, maybe, because I have inhaled it [dust] for 3 years without any symptoms. I think I have to use a mask in the future but am not sure when.... It depends on the immunity of each person" [Male, 41 years old, 3 years' experience]

"I can't say that I can do this confidently [wearing mask] because I really feel unfamiliar with it. I don't have much tolerance to wearing it continuously for a long time. It's good to wear it for our health. Dust won't be passed into our bodies. But I feel so uncomfortable" [Female, 39 years old, 10 years' experience]

The above excerpt means that a second-hand clothing seller who is unconfident of his or her capability to prevent him or herself from health risk may have higher perception of barriers than of benefits. Although the individual acknowledges the benefits of preventive health behaviour, the perceived barriers play a greater role in determining his/her work behaviour. These findings reflect other literature, as concluded by

Bandura (1977, 2001) and in the seminal work by Rosenstock (1974): self-efficacy relates to the confidence in one's capability to take action. The difference between the second-hand clothing sellers feeling confident and unconfident depends on their certainty about their ability to perform health prevention and control. The findings of the present study also show that the second-hand clothing sellers who are confident of their capability to protect themselves from health risk are truly understand the necessity of risk prevention and control and intend to perform preventive health behaviour to minimise risk. It means that self-efficacy reveals significant effects on an individual's intention to take action. Also, an individual who intends to perform preventive health behaviour may have a higher perception of benefits than of barriers as their statements focused on the benefits of preventive health behaviour rather than the barriers to taking action. The findings of this study can highlight what self-efficacy in the second-hand clothing market is concerned with in relation to the work processes of the second-hand clothing sellers.

The findings also show that perceived benefits outweigh barriers and perceived self-efficacy of taking action have mutual influences according to their relationship. On the one hand, perceived benefits outweigh barrier influences self-efficacy or ability to perform preventive health behaviour of second-hand clothing sellers. It means that the seller perceiving high benefits and low barriers of preventive health behaviour tends to have a high confidence to perform positive work behaviour. Although one of the surprising results of Deshpande and Basil (2009) illustrates that perceived benefits failed to predict self-efficacy of college students regarding the likelihood of eating healthy diet defined as eating a diet that is low in bad cholesterol, bad fat, sodium and sugar and, high in fibre, fresh vegetables and fruits. Most studies regarding the relationship between perceived benefits, barriers and self-efficacy mention that perceived benefits/barriers of taking action appeared to have effects on behavioural intention and confidence or perceived self-efficacy (Baldwin et al., 2006; Dijkstra & Borland, 2003; Maes & Louis, 2003; Marlatt & Donovan, 2005; Sullivan et al., 2008; Von Ah et al., 2004; Yazdanpanah et al., 2015).

Sullivan et al. (2008) found that the major HBM contributor to six month exercise intentions was the perceived benefits of undertaking exercise to reduce stroke risk. Similarly, Yazdanpanah et al. (2015) concluded that when choosing food, consumers

are thinking about the potential health benefits of the product, and are interested in health-related problems. Also they consume organic foods because they perceive them to be healthier than conventional ones both for themselves and for the environment. Therefore, the higher perception of benefits is likely to lead to greater confidence in using organic foods. Moreover, Baldwin et al. (2006), Dijkstra and Borland (2003) and Marlatt and Donovan (2005) found that the confidence of participants enrolling in a smoking cessation programme in their ability to remain smoke free predicted continuing as non-smokers, but only for those ex-smokers who perceived benefits to returning to smoking. In contrast, self-efficacy did not matter for participants who perceived few benefits in returning to smoking.

On the other hand, the relevant studies point out that self-efficacy influences perceived benefit/barrier (Da Costa & Ireland, 2013; Ghaderi et al., 2017; Marcus et al., 1994). Da Costa and Ireland (2013) concluded that higher perceived self-efficacy for exercise was the only factor related to greater perceived benefits to leisure-time physical activity during pregnancy among women who were insufficiently active or inactive before pregnancy. Lower self-efficacy for exercise was also related to total barriers to leisure-time physical activity during pregnancy for both groups. Consistent with the studies of Ghaderi et al. (2017) and Marcus et al. (1994), individuals with higher perceived self-efficacy may exert greater efforts towards benefits and overcome barriers regarding preventive health behaviour. These are consistent with the findings of the present study: self-efficacy was apparent in the informants with higher perception of benefits than perception of barriers of taking action to prevent work-related health problems. The more perceived benefits, the more perceived self-efficacy.

4.7 Cues to action

Cues to action or strategies to activate “readiness” or readiness to change individual preventive health behaviour of second-hand clothing sellers could be categorised into two aspects, bodily and environmental events as follows

4.7.1 Bodily event

Bodily event or internal cue is the personal experience about work-related health problems, such as a negative change in bodily state or perception of symptoms. Internal cues of informants derive from their own illness, illness of family members, fellow second-hand clothing sellers, friends and neighbours.

“It [sunlight] affects to my eyes. I will feel irritated in my eyes whenever I face toward it” [Male, 46 years old, 23 years’ experience]

“Sometimes I feel tight in my chest and find it difficult to breathe. I have felt tired for just 1 month because I have inhaled dust for a long time...”

[Female, 38 years old, 15 years’ experience]

As well, personal influence such as from family members also appeared in the research transcripts as the informants were motivated to take an action because of their family members’ illnesses.

“I know [the health problem is from dust] because she [my daughter] didn’t have any symptoms before I began selling clothes. I noticed that after I started my work especially separating clothes at my house, she began to have an illness. Then, when I have changed to work only at the market, then she has had good health again. She didn’t often have symptoms as mentioned earlier, so I have made a decision to work in the market since then”

[Female, 26 years old, 2 years’ experience]

“I didn’t open bales and separate clothes in my house because my parents couldn’t have contact with the goods. They had some symptoms when they stayed near the clothes like sneezing and coughing. I think because they are old, 60 years old.... I noticed that they couldn’t stay close to the goods or stay in the area which has a lot of dust” [Male, 41 years old, 3 years’ experience]

Moreover, some informants perceived the cues from hearing of the symptoms or health conditions related to work-related health problems from fellow second-hand clothing sellers.

“I never had [a big pain] but my co-worker had. He had severe lower back pain because he moved a bale wrongly. Once, he twisted his body while moving the heavy bale. Then he felt severe pain at his waist. I brought him to hospital at 11 pm. He has “Klam naer ak seb” [Myositis, Muscle strain or Polymyositis]”
[Male, 29 years old, 9 years’ experience]

The above excerpts mean that sequences of signs and symptoms play an important role in making the sellers concerned about work-related health problems and motivate individuals to take action. Also, in the eyes of the sellers, it seems like illness of family members is more important than personal symptoms.

4.7.2 Environmental events

Environmental events, e.g., mass media communications and interpersonal interactions such as advice from others, is defined as environmental encouragement to change individual preventive health behaviour. According to the research transcripts, many informants mentioned that they received some information regarding occupational health risk and risk prevention and control from various sources, in particular, media communication (televisions and magazines), doctors, nurses, their friends, colleagues, relatives and customers.

“.....He (a doctor) gave me advice. He suggested I wear a mask when I am exposed to dust such as when I check stock. I can inhale dust into my body if I don’t wear a mask.....” [Female, 45 years old, 20 years’ experience]

“They [my customers who convinced me] are teachers and a lecturer, in total 3 customers. They told me that I should wear a mask. When they saw I wore it, they said to me it’s very good that I use it”
[Female, 44 years old, 15 years’ experience]

The above excerpt points out that a message from someone having credibility or dependability becomes an important factor influencing second-hand clothing sellers' decisions to perform positive work behaviour. This is important for health promotion to motivate the sellers into performing preventive health behaviour.

In conclusion, as present in figure 49, either or both cues (i.e., internal cues or bodily events and external cues or environmental events) are reported to trigger behaviour performance of second-hand clothing sellers. There is no evidence indicating that which event is more significant or has more influence. It only explains that both events including the cues from medical symptoms, health care providers, families, friends, mass media campaigns, newspaper or magazine articles and even illness of family members or friends, are additive in the effects that can trigger actions (Beer et al., 2012; Glanz et al., 2008; Orji et al., 2012).

The findings also show that both internal and external cues to action influence the other components of HBM especially second-hand clothing sellers' perception of health threats. This result is also supported by several current studies indicating that cues to action, which can be internal (e.g. bodily symptom) or external (e.g. health communication), influence perceived threats (Atkinson & Permuth-Levine, 2009; Carpenter, 2005; Gerend & Shepherd, 2012; Morris et al., 2012; Shahrabani & Benzion, 2012), perceived benefits/barriers (Atkinson & Permuth-Levine, 2009; Gerend & Shepherd, 2012; Shahrabani & Benzion, 2012) and perceived self-efficacy (Gerend & Shepherd, 2012; Ross et al., 2010; Shahrabani et al., 2009). Shahrabani and Benzion (2012) concluded that positive or negative personal experiences and information can alter people's beliefs. In particular, it seems as though a negative experience with illness (self or family) will increase perceived threats – perceived susceptibility and severity of illness – and perceived benefits from the vaccine, and in addition will decrease the perceived barriers to vaccination.

Gerend and Shepherd (2012) support these findings, they concluded that indeed, informants who were advised by a health care provider to receive the human papillomavirus vaccine reported greater perceived susceptibility to HPV infection, higher perceived benefits and lower perceived barriers to HPV vaccination, higher perceived self-efficacy, and more favourable subjective norms for receiving the

vaccine. Similarly, Atkinson and Permut-Levine (2009) concluded that because of internal cues such as physical ailments and mental health problems or emotional concerns, informants sought out yoga to reduce the impacts of their illness; for example, an informant with chronic fibromyalgia wanted to reduce her pain, while external cues such as hearing about the advantages of yoga from friends or colleagues as well as learning about yoga in print and television media which had reported the benefits of yoga had influenced the informants' perception of the benefits of yoga. For example, they perceived that yoga can reduce stress or enhance flexibility, inner peace, and improve posture. Champion and Skinner (2008) and Orji et al. (2012), however, stated that cues to action is often missing from research as researchers know little about cues to action or their relative impact because this construct has not been identified clearly in research, or little research has been focused on the impact of cues to action. The beliefs of second-hand clothing sellers are concluded as the following diagram.

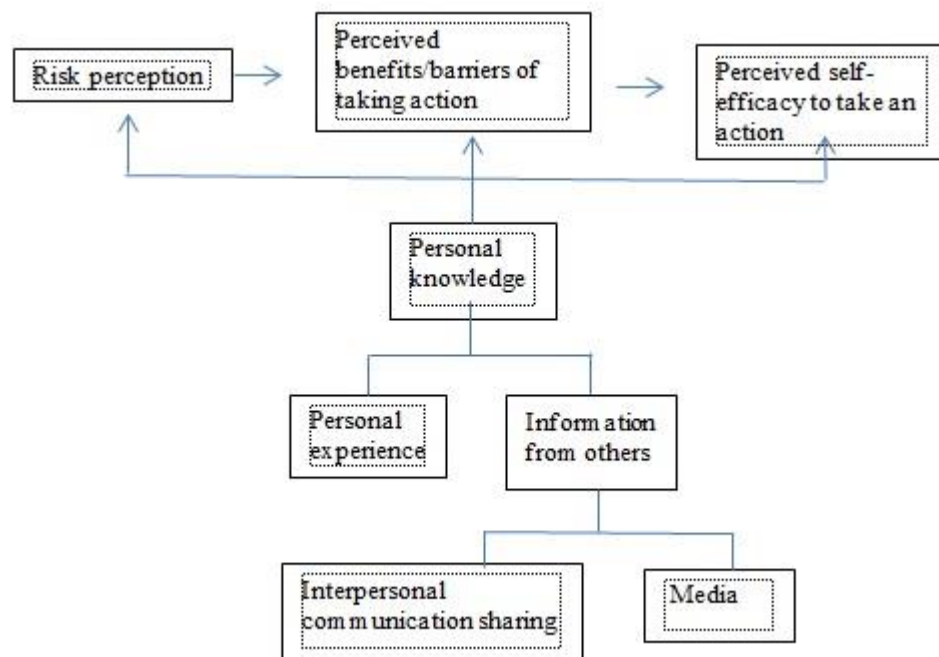


Figure 49 The beliefs of second-hand clothing sellers

The above diagram shows that knowledge is an important factor influencing second-hand clothing sellers' risk perception, perceived benefits/barriers and perceived self-efficacy. For example, because of informants' limited knowledge about the potential health impact of work exposures, many of them believe that work affects only people who have health conditions or limitations and work does not affect workers except

normal problems. In contrast, informants who have knowledge regarding the potential health concerns from their working conditions due to having experience and receiving information from others perceived that work affects all people who are exposed to health risk.

According to the kinds of knowledge, Jashapara (2004) stated that “knowledge exists along a continuum between tacit knowledge (know how) and explicit knowledge”. Laudon (2004) said that “tacit knowledge refers to personal knowledge embedded in the human mind through experience and involving intangible factors such as personal belief, perspective, and values. Explicit knowledge refers to tacit knowledge that has been documented”. Argote (1999) concluded that individuals are the most effective medium for acquiring and storing tacit knowledge, through interpersonal information sharing; while technology – through media communication – is the best for explicit knowledge. Several studies show that knowledge, described as one of the modifying factors in HBM, plays an important role in increasing risk perception (Allahverdipour & Emami, 2008; Janjua et al., 2007; Li et al., 2016; Troncoso, 2000), increasing the perception of benefits and decreasing the perceived barriers (Allahverdipour & Emami, 2008; Bond & Nolan, 2011; Dündar et al., 2006; Shahrabani and Benzion, 2012) and increasing the self-efficacy of informants (Garvie et al., 2011; Othman et al., 2012). The details are as follows.

Firstly, knowledge influences individual risk perception; Janjua et al. (2007) explained that knowledge influences the perceived susceptibility and severity of diseases. Both of these determine perceived health threats which, in turn, influences health behaviour. Arcury et al. (2002) support their findings: they described that farmworkers having greater knowledge of places at which they can be exposed to pesticides perceive greater susceptibility and severity of health problems. That is, knowledge heightens their sense of risk perception to pesticide-related outcomes. However, greater knowledge about preventive health behaviours which might reduce their own pesticide exposure is only marginally related to higher perception of risk. When their behaviour is examined, farmworkers do not behave more safely to reduce pesticide exposure based on only their own perceived susceptibility or severity. Thus, knowing one is exposed to a health hazard is important for the perception of susceptibility and severity, but it is not sufficient for changing individual behaviour.

Secondly, about the relationship between knowledge and perceived benefits/barriers: Allahverdipour and Emami (2008) showed that knowledge about Pap smear was significantly associated with the perceived benefits of early detection. Similarly, Dündar et al. (2006) supported that significant and positive correlations were found between the knowledge of breast cancer and the perceived benefit of mammography. Although the both studies did not mention explicitly the relationship between knowledge and perceived benefits, the results in the present study show that perception of the benefits of taking action is the next step to expect after individuals understand the vulnerability and severity of the disease threats which are likely to take place and, also, when they understand how to prevent themselves from adverse health outcomes. And thirdly, about knowledge and perceived self-efficacy: Othman et al. (2012) concluded that knowledge about breast cancer and screening was significantly correlated with women's perception of self-efficacy or their intention to participate in mammogram screening. While Garvie et al. (2011) mentioned that although acknowledging negative consequences associated with medication adherence, youths with HIV expressed high self-efficacy (intent) to adhere.

Finally the present study reveals that internal cues (i.e., personal symptoms) and external cues (interpersonal information sharing and media) serve to shape knowledge and understanding about work-related health problems of second-hand clothing sellers. Although there is only one item of literature showing explicitly that the cues to action construct is subsumed of health knowledge including health motivation (Jayanti & Burns, 1998), many studies have shown that knowledge can be provided not only through health education (Centers for Disease Control, 2013; Huynen et al., 2005; Nutbeam, 2000; Wardle, Parmenter & Waller, 2000), but also through individual experiences and information (Argote et al., 2000; Dündar et al., 2006; Fussell & Krauss, 1992; Nickerson, 1999; Ryu et al., 2005; Sadler et al., 2001). Consequently internal cues such as personal symptoms and external cues consisting of information from interpersonal information sharing as well as information from the mass media are sensible to claim that they influence the individual's knowledge.

4.8 Summary

All the above excerpts extracted from the interviews, with the informants combining with observational data, illustrate the second-hand clothing sellers' beliefs about work-related health problems/injuries. The findings show that knowledge arises from personal direct and indirect experience. It seems that personal indirect experience has a strong impact on behaviour change and is most important for health promotion strategy for second-hand clothing sellers. According to information through the media, this method may be weaker than personal experience and interpersonal information sharing. This is because information through mass media such as TV is not much available particularly for second-hand clothing sellers. The present findings also conclude that, personal experience and information increase individual knowledge and, in turn, knowledge as one of the modifying factors in HBM, influencing individual perceptions consisting of perceived threats, perceived benefits/barriers and perceived self-efficacy. Consequently internal and external cues to action are important factors influencing the other components of HBM, especially perceived threats or risk perception (i.e., the combination of perceived susceptibility and severity). While risk perception influences the perceived benefits of taking action, i.e., the potential benefits in reducing susceptibility and/or severity from the work-related health problems, they will not be considered if second-hand clothing seller does not have risk perception. In turn, perceived benefit outweighs the barriers to taking action and influences self-efficacy of second-hand clothing sellers.

It is a challenging task to explain the relationships between HBM constructs as there is no study regarding HBM, and no qualitative study indicating the relationships between constructs. It means that all studies explaining the relationships between constructs are based on HBM and quantitative study. This is because the significant relationships between constructs and variables need statistical analysis to identify the relationships. In this study, however, ethnographic analysis, as introduced by Spradley (1980), combined with plenty of interview and observational data, illustrate the themes of each constructs. After that, considering these themes along with many supporting documents related to HBM and quantitative study could result in the relationships between the HBM constructs. As Eisenhardt (1989) stated, qualitative data are beneficial for researchers to understand the theory or rationale underlying relationships

presented in the quantitative data or may suggest directly theory which can then be strengthened by quantitative support. Also, the qualitative data often provides a better understanding of the dynamics underlying the relationship, that is, the "why" of what is happening. For the present study, certain things (i.e., positive and negative work behaviour) are happening because of sufficient and insufficient individual perception regarding occupational health risk and risk prevention of second-hand clothing sellers. These provide the new insight that the limitations to accessing information and knowledge of second-hand clothing sellers should be considered as the biggest cause underpinning the occurrence of negative work behaviours (the details are presented in chapter 7). These provide the new insights for health promotion strategy for the workers in the future.

The beliefs of second-hand clothing sellers regarding occupational risks or risk prevention as mentioned above portrayed throughout this chapter are formed as a result of the process to answer the question "What are the second-hand clothing sellers' beliefs regarding the occupational risks or risk prevention?" The answer is presented as table 5: An overview of second-hand clothing sellers' beliefs. The table illustrates the "beliefs" in the five aspects of personal perceptions in HBM, perceived susceptibility, severity, benefits, barriers and self-efficacy, while cues to action are determined as supporting factors affecting the five main individual perceptions about beliefs. The important belief which comes out from the interview and observational data is risk perception. This is because whether the other components of belief (i.e., perceived benefits, barriers and self-efficacy) will appear or not depending on individual understanding about the vulnerability and severity of the disease threats. Finally, the next step is to consider how these perceptions do not or do influence the second-hand clothing sellers' decisions on actions to be taken in dealing with health concerns caused by their work is presented in the chapter 5.

Chapter 5 Relationship between second-hand clothing sellers' beliefs and their specific preventive health behaviours

5.1 Introduction

In this chapter I illustrate the findings of the present study answering the research question, “What are the preventive health behaviours of second-hand clothing sellers?” and “What is the relationship between second-hand clothing sellers' beliefs and their preventive health behaviours? Initially I focus on the second-hand clothing sellers' working behaviours to prevent health problems such as accidents or injuries, but include a range of problems related to market working conditions. Following this I clarify the relationship between second-hand clothing sellers' beliefs, which were outlined in the description of findings in chapter 4, and explore the beliefs and preventive health behaviours in relation to each other.

The main topics described below, preventive health behaviours of the sellers, are categorised into the five sections, consisted of work behaviours to prevent respiratory, musculoskeletal, skin and eye problems as well as accidents or injuries. The details of each topic illustrate the working behaviours that could be incorporated into activity in the market to protect the sellers by controlling the three essential elements in occupational health, i.e., source (contaminant), pathway and receptor. These behaviours are directly related to the nature of work and work conditions that second-hand clothing sellers undertake. For the second part of what follows, I link and clarify the relationship between the six key concepts of HBM and preventive health behaviours of the workers, positive and negative behaviours. Finally, I then interpret and summarise what all this means for occupational health and the HBM.

5.2 Preventive health behaviours of second-hand clothing sellers

According to knowledge and evidence about health promotion, in order to prevent and control occupational health risk of workers, the straightforward approach to solving the occupational health threat is to examine the issue in terms of its three fundamental elements, source, path and receiver (Bauer et al. 2001; Lally & Barrett, 1999; Solet & Barach, 2012). Consequently, work behaviours to prevent health problems of second-

hand clothing sellers are considered from these three aspects as the most appropriate ways to reduce occupational health threats sellers are exposed to. An overview of preventive health behaviours of second-hand clothing sellers is presented as table 6.

Thematic focus sensitised by the work the cloth sellers do	Preventive health behaviour	Action (from fieldnote, field work, personal journal and photograph)	Example of interview (from transcription)
Work behaviours to prevent respiratory problems	Using mask as the personal protective equipment	Never use mask (3 informants)	<ul style="list-style-type: none"> • I never wear it [mask] before • I do not like it [mask] and I also never use it before • I did not try to use it [mask] yet. I think it seems uncomfortable.
		Did not actually use mask/ using sometimes (12 informants) <ul style="list-style-type: none"> • Because they do not have allergic symptoms • They did not feel uncomfortable from inhaling clothing dust (the process of selling clothes) • Mostly because of feeling uncomfortable 	<ul style="list-style-type: none"> • The sellers have to use mask if they have allergy. For me, I do not use it because I do not have allergy • It does not have a lot of dust [in the clothes] like the process of grading clothes because dust was already released and floating in the air. So, it is not harmful and I do not feel uncomfortable • I could wear it such a short time around 5-10 minutes. Then I had to take it off because I really felt uncomfortable
		Actually use mask while grading clothes (9 informants) <ul style="list-style-type: none"> • Because they have dust allergies [using mask in order to avoid having the symptoms] 	<ul style="list-style-type: none"> • I have allergy to dust. Whenever I am contacted or exposed to it, I will have sneeze, snot, or something like that. I often use mask because I have allergy to dust. If I don't have allergy, I don't want to wear mask

Table 6 An overview of preventive health behaviours of second-hand clothing sellers

Thematic focus sensitised by the work the cloth sellers do	Preventive health behaviour	Action (from fieldnote, field work, personal journal and photograph)	Example of interview (from transcription)
		<p>Actually use mask seriously even while selling clothes (3 informants)</p> <ul style="list-style-type: none"> To prevent respiratory diseases 	<ul style="list-style-type: none"> I need to avoid it [dust] by wearing mask. So, I wear mask every time when I expose to dust as when I separate clothes from sacks or even when I check the stock
	Arranging a good airflow	<p>Using fan to create wind (all informants)</p> <ul style="list-style-type: none"> To prevent dust spreading in the air Feeling more comfortable while separating clothes 	<ul style="list-style-type: none"> The wind [from a fan] is blowing and transferring dust from indoor to outdoor area. Dust is passed through the door. If I don't use it, the dust will spread in the air inside house. So, I have to use a fan because I don't want to inhale dust in the air If I do not use fan, I will feel uncomfortable because of hot weather and spreading dust. So, fan is necessary for me especially when I am separating clothes
	Separating clothes in the wide space area	<p>Separating clothes outside house (at front or back yard, storage as well as stall or shop) (21 informants)</p> <ul style="list-style-type: none"> To avoid themselves and family member from spreading dust 	<ul style="list-style-type: none"> ...when I was grading clothes, she couldn't stay near the grading area. She had to sneeze immediately and snot was run down from her nose. So, she has to stay in the separate room and I have to separate clothes outside [house]
Work behaviours to prevent musculoskeletal problems	Right postures	<p>Actually worked with the wrong postures (25 informants)</p> <ul style="list-style-type: none"> Because of some reasons (inconvenient, awkward, time-consuming, etc.) 	<ul style="list-style-type: none"> It is awkward and inconvenient [for using chair instead standing on tiptoe]. Also, I will work slowly if I use it. I have limited time to prepare the stall..... I have to work in a hurry. Otherwise, the time for selling clothes will be shorter

Table 6 An overview of preventive health behaviours of second-hand clothing sellers (continued)

Thematic focus sensitised by the work the cloth sellers do	Preventive health behaviour	Action (from fieldnote, field work, personal journal and photograph)	Example of interview (from transcription)
		Right postures (2 informants) <ul style="list-style-type: none"> • Because of suggestions from health care provider and experiences with the severe pain 	<ul style="list-style-type: none"> •I have made a decision to follow the doctor's suggestions. I have to change my working behaviours, for example..., I have to drop my knee and don't bend my back when I want to pick something on the floor and avoid standing on tiptoe.....
Work behaviours to prevent skin problems	Using personal protective equipment, such as hat and long sleeves, to prevent skin from strong sunlight	Refusing using hat while exposing to the strong sunlight (3 of 8 informants who have to face with strong sunlight) <ul style="list-style-type: none"> • Feeling inconvenient, awkward • Feeling familiar with the strong sunlight Using PPE to prevent strong sunlight <ul style="list-style-type: none"> • Feeling more comfortable while exposing to strong sunlight 	<ul style="list-style-type: none"> • I prefer to work without hat because it makes me feel inconvenient while working • I am familiar with it [strong sunlight]. It's not my serious problem, just hot • I feel uncomfortable if I face to the strong sunlight directly. So, it is better to wear hat, because when I wear it, I feel more comfortable
Work behaviours to prevent eye problems	Using sunglasses to prevent eyes from strong sunlight	Refusing using sunglasses to prevent eyes from strong sunlight (all informants) <ul style="list-style-type: none"> • Feeling inconvenient, uncomfortable, unconfident etc. • Eye problems are not the matter of great concern 	<ul style="list-style-type: none"> • I never use it [sunglasses] and don't want to try to use it. I will feel shy and unconfident. I think my friend will tease me if I wear it • I am OK and have enough tolerance for it

Table 6 An overview of preventive health behaviours of second-hand clothing sellers (continued)

Thematic focus sensitised by the work the cloth sellers do	Preventive health behaviour	Action (from fieldnote, field work, personal journal and photograph)	Example of interview (from transcription)
Work behaviours to prevent accidents/injuries	Preventing themselves from accident (fasten seatbelt, be careful etc.)	Preventing themselves from accidents <ul style="list-style-type: none"> • Because of their experiences • Because of information such as news 	<ul style="list-style-type: none"> • ...I saw someone rushed from a car and was dead. It was a collision between the two cars. The guy did not wear seat belt..... I also used to see someone who wear seat belt. The car flipped over several times but he was OK. I noticed that he wore seat belt..... • Last time I heard news from TV. The car collided with a power pole and a crash led to a car fire. All passengers were dead. I am so scared about a car accident because I often heard a lot of news about accidents. So, I have to wear a seatbelt every time when I travel for a long journey.....

Table 6 An overview of preventive health behaviours of second-hand clothing sellers (continued)

The above table shows the overview of preventive health behaviours of second-hand clothing sellers categorised into five aspects consisting of behaviour to prevent respiratory problems, musculoskeletal problems, skin problems, eye problems and accidents/injuries. The findings conclude that most informants perform their working processes with negative work behaviours and were at risk of health problems from work exposure, in particular respiratory problems due to working without wearing masks and musculoskeletal problems due to working with incorrect postures. In the following sections, I explore the areas summarised from the table in the light of the literature and key findings from the present study.

5.2.1 Work behaviours to prevent respiratory problems

Because second-hand clothing sellers actually work mostly in dusty areas for prolonged periods they can be exposed to dust by inhaling it from the clothes and the environment at the workplace (Sirithammaphan, 2011; Thongkoop, 2009). The relevant studies regarding the health risk of those who work in the clothing and textile business sectors illustrate that the workers can be exposed to cotton dust and risked respiratory diseases, for example, allergic reaction, asthma and lung disease (Allwood, 2006; Caldeira et al., 2006; Chaari et al., 2009; Hinson et al., 2016; Jaen et al., 2006; Lai & Christiani, 2013; Minov et al., 2014; Nafees & Fatmi, 2016; Paudyal et al., 2010; Rajsri et al., 2013). Consequently, behaviours preventing ill-health from dust exposure, for instance, wearing masks, are necessary for the workers to guard themselves against respiratory problems (Ramirez, 2015; Rengasamy et al., 2010).

The following section elucidates the working behaviours required to prevent respiratory problems of second-hand clothing sellers. To protect themselves, as receivers, from the respiratory problems, they have to avoid contacting dust from clothes directly by wearing masks, as personal protective equipment. As well as this, to prevent dust from the pathway they should arrange good ventilation in the workplace by creating airflow within a stall, using a fan to create draught and separating clothes in wide spaces. Furthermore, using containing materials, such as bags or boxes, for keeping clothes is the way to prevent spreading dust from the source of health threats, clothing dust spreading from the bales while separating clothes. The details of work behaviours related to risk and exposure and to prevent respiratory problems that were seen and reported in the present study are as follows.

5.2.1.1 Using masks as personal protective equipment

Selling clothes in the market without using masks was the most common behaviour of the second-hand clothing sellers. Most of them stated that dust does not have a high impact on their health as they do not have significant illness.

“I don’t wear a mask when I am selling clothes because it doesn’t have a lot of dust [in the clothes] like the process of grading clothes because dust was

already released and floating in the air. So, it's not harmful and I don't feel uncomfortable" [Male, 59 years old, 20 years' experience]

While some informants stated that they can work in dusty areas without using masks because they do not have a health condition, especially allergic symptoms.

"The sellers have to use a mask if they have an allergy. For me, I don't use it because I don't have an allergy" [Female, 26 years old, 2 years' experience]

"It has dust in the goods but for me it's not much. I have never worn a mask since I have done this job because I don't have any symptoms. I feel normal when I am separating clothes. I think that the sellers have to wear a mask if they have a cold or have other symptoms. If they don't have allergies, it is not necessary to use it. Our bodies are familiar with dust if we face it every day. I think I prefer to work without a mask....."

[Male, 49 years old, 18 years' experience]

The above excerpt demonstrates that cues to action – personal symptoms – relating to perceived susceptibility and severity of health problem influence second-hand clothing sellers' preventive health behaviour. It means that when the seller is unaware of the impact of work on health due to disappearance of the health condition or freedom from illness, s/he would not take any precaution to prevent him-or herself from any potential health risks from work exposure. Also, as long as the health risk insignificantly affects routine and daily life of individual, taking action to minimise the health risk is still not necessary.

In contrast, those sellers who used masks regularly in order to protect themselves from allergic symptoms, as their health conditions, mentioned the different viewpoints. Their statements represent the necessity of using masks especially for avoiding respiratory symptoms. The following examples illustrate comparisons of participants' rationales for wearing and not wearing masks.

"...If I don't use a mask because of some reason such as I forget to buy it while separating clothes, I need to take a pill immediately. It's for relieving the

allergic symptoms. If I use a mask, it won't be necessary to take medicine because I won't have allergic symptoms. I will have a dust allergy such as sneezing several times if I don't use a mask"

[Female, 30 years old, 8 years' experience]

"I have an allergy to dust. Whenever I am in contact with or exposed to it without a mask, I will have sneezing, snot, or something like that. So I often use a mask because I have an allergy to dust. If I don't have an allergy, I don't want to wear a mask"

[Male, 48 years old, 18 years' experience]

"I wear it [a mask] all the time [during separating clothes] because it can prevent me from the [allergic] symptom. When I in contact with dust [without a mask], I feel irritated in my nose. Although it is just nose irritation...It makes me feel really uncomfortable. It [irritation] affects me a lot"

[Male, 24 years old, 1 year's experience]

The above excerpt points out that preventive health behaviour is really significant for individuals with an existing health condition. It means that second-hand clothing seller's perception and health behaviour could possibly change over time if the health problem is manifest and effects on his/her ability to carry on working.



Figure 50 Separating clothes without using mask

Notably, during the time of data collection in the field, I noticed that only four second-hand clothing sellers used masks while selling clothes in the markets. Luckily, three of them accepted an invitation to be informants in my study. It was interesting that all of them, the three informants, did not have health conditions such as allergies according to the interviews. Also, avoiding health problems was the main reason of using mask.

“.....I need to avoid it [dust] by wearing a mask. So, I wear a mask every time when I am exposed to dust such as when I separate clothes from sacks or even when I check the stock” [Female, 45 years old, 20 years’ experience]

“I have to wear a mask all the time when I am exposed to dust because of fear, just fear, not any other reasons. The first thing that I should do when I separate clothes is to wear a mask” [Female, 45 years old, 7-8 years’ experience]

The following excerpts reveal the reasons why they have made a decision to use masks:

“My daughter encouraged me to wear a mask. She said to me I have to wear a mask as it can prevent my body from inhaling dust. She also told me there may be a lot of germs in the dust that we inhale into our bodies” [Female, 45 years old, 20 years’ experience]

“Once, I read a magazine. I found [the detail in the magazine] that dust mites are very small. We can see them under a microscope. If they pass into our body, we can have respiratory diseases. I think probably there are dust mites in the clothes because it takes a long time to transport them [by ship, 1-2 months] to us. I saw their pictures and felt scared. I think it is better to prevent them. When I went to the clinic, a doctor suggested to me wearing a mask. Don’t ignore using it. He said that I may now feel OK, but if I don’t wear a mask for a long time. I probably have health problems in the future because I inhale dust every day” [Female, 45 years old, 20 years’ experience]

“My customers told me that I should use a mask because of a lot of dust in the air. They are teachers and a lecturer, in total three customers. They told me that

I should wear a mask. When they saw I wore a mask, they said to me it's very good that I use it" [Female, 45 years old, 7-8 years' experience]

"I believe [them, my customers] what they said about dust. It's true. Previously, when I opened the clothes without using a mask, I felt uncomfortable especially inside my nose because of dust. Sometimes I sneezed but not much. I know this is because of dust. Moreover, the health officers working in a primary care centre in my village also suggested to my husband to wear a mask while exposed to dust. Sometimes they gave him a mask as well. He told me that I finally have made a decision to protect myself by wearing a mask, my husband too" [Female, 45 years old, 7-8 years' experience]

The above excerpt illustrates that encouragements and suggestions from others have an important role in promoting positive health behaviours for second-hand clothing sellers, even the healthy ones. Even though healthy persons do not have experience of illness themselves, they can change behaviour because of information and suggestions from others. It means that cues to action play an important role for changing behaviour in healthy persons. Further, where there is already a pre-existing condition, this too is a powerful cue to action as might be anticipated.

In conclusion, internal cues – personal symptoms such as dust allergy – influence personal perceptions of susceptibility to and severity of respiratory problems. When a second-hand clothing seller is unaware of the impact of work on health due to disappearance of signs and symptoms of work-related health problems or the symptoms may appear but they only affect the routine and daily life of the seller insignificantly, taking action to minimise the health risk is still not necessary, unless the health problem is manifest and affects his/her ability to carry on working. S/he, then, accept that preventive health behaviour is really significant. Moreover, apart from personal health problems, encouragement and suggestions from others whom h/she credits and trusts also have an important role in promoting positive health behaviours for second-hand clothing sellers, even among the healthy persons. In addition to using a mask to prevent dust exposure, a further recommended strategy is to arrange sufficient ventilation as described in the next topic.

5.2.1.2 Arranging sufficient ventilation of the workplace

Arranging sufficient ventilation of the workplace is the way to prevent spreading dust between the workers and sources or we can call the “Path” or “Pathway”. Path is the means or route by which a source of contamination can migrate; an identified receptor can be exposed to, or be affected by an identified source. Consequently, path is the distance between source and receiver (worker) (LaMontagne et al., 2003, 2005; Wasserman, 1994). In general, almost all of the informants’ stalls had locations with good ventilation as the wind could easily flow through their four-sided airflow passages. The arrangement of each stall was similar as the clothes were hung on the rails and umbrella stems were not too tightly packed (figure 51). There was only one stall which had insufficient airflow: the location had the fairly bad ventilation, and lacked air flow because of the tight clothes (figure 52). I perceived the smell of clothing when I stayed within the stall.

The overall picture regarding the environment of the informants’ stalls is that they had good ventilation as the air could pass freely on all four sides. So, the good ventilation was a characteristic of the stalls rather than emerging from the sellers according to the fieldwork.



Figure 51 The stall having a four-pass airflow passage



Figure 52 Lack of air flow in the stall

To reduce dust while separating clothes another way, second-hand clothing sellers prefer to use a fan instead of wearing a mask as this method is easy and convenient. Also, it can relieve allergic symptoms such as sneezing. Thus, using a fan was the most common practice to blow out dust while separating clothes.

“Dust was blown away and vanished outside after using a fan to create a wind. If I don’t use it [fan], the dust will spread in the air inside the house. So, I have to use a fan because I don’t want to inhale dust in the air”

[Female, 35 years old, 9 years’ experience]

“I try to release dust from my house by using a fan. I can’t work without operating it because the dust might get passed through my nose, so I will sneeze, have a cold or get other allergic symptoms,.....Even though I don’t use a mask to prevent dust, I’m still OK because I use a fan every time when I separate clothes. It can help me a lot”

[Female, 39 years old, 10 years’ experience]

“I prefer to use a fan rather than a mask because it is more comfortable and easier. I use it to relieve the clothing dust. Actually, I sit in front of the fan while working. The fan will blow air which passes out through the door”

[Male, 33 years old, 1 year’s experience]

The above excerpt demonstrates that using a fan is an alternative which can be applied to deal with dust exposure among second-hand clothing sellers. They prefer using a fan to reduce dust in the workplace rather than wearing a mask to protect them from dust because using a fan is easier, more comfortable and effective. It means that the high perception of benefits and low perception of barriers to taking action have an important role in promoting preventive health behaviour.



Figure 53 Using fan to blow out dust while separating clothes

Moreover, because almost all informants in the present study owned the stalls or shops for their business, they had more than one place for separating clothes: at home or in a stall in the market, depending on their convenience or arrangement of their business. Actually, the environment of the working area was good because of the four-way airflow passage as well as the wind blowing from an open fan. According to the interviews, it is remarkable that most informants who did the process of separating clothes made a decision to separate clothes outside their houses which has a wider space such as a front or back yard, and storage, as well as in the stall or shop. Most of these stated that they have to work outside their houses in order to avoid themselves or their family members being in contact with dust. Notably, five of them whose sons or daughters have allergic symptoms, such as excessive sneezing, runny nose, cough and asthmatic attack, if they are exposed to dust, stated that dust affects their children and they have to prevent them from spreading dust especially while separating clothes.

“I have to separate clothes outside my house because there is a lot of dust spreading in the air. There is a large space surrounding my house, so I can separate clothes outdoors. I can’t do this inside the house because my daughter is so young. I don’t know if she has an allergy or not. I would say that every type of clothes has dust, especially coats, towels and pants”

[Female, 33 years old, 9 years’ experience]

“I didn’t open bales and separate clothes in my house because my parents couldn’t be in contact with the goods. They had some symptoms when they stayed near the clothes like sneezing and coughing. I think because they are old, 60 years old.... I noticed that they couldn’t stay close to the goods or stay in an area which has a lot of dust. When I was preparing to separate clothes, I told my parents and my son go far away from it. I’m concerned about dust and I don’t want them inhaling dust into their body, even though my son doesn’t have any symptom” [Male, 41 years old, 3 years’ experience]

“She will have asthma if she is exposed to a lot of dust. She will start by sneezing, then, if she sneezes too much, she will have asthma and need to spray an inhalation solution into her mouth. So, I have to separate clothes outside my house....in front of the house. Before opening the [clothing] bale, I let her [my daughter] go to the separate room. Otherwise, she has to stay at my relative’s house nearby. This is because when I was grading clothes, she couldn’t stay near the grading area. She began to sneeze immediately and snot was running down from her nose. So, she has to stay in a separate room and I have to separate clothes outside” [Female, 39 years old, 18 years’ experience]

“I used to separate clothes in my house. At that time, when she faced dust, she had allergies and asthma immediately. After that, I have changed to separating clothes outside my house” [Female, 33 years old, 10 years’ experience]

“I separate clothes in my storage unit at “Ta Lad Kaw” to avoid my son being in contact with the dusty area because my son has an allergy to dust.... Now, we don’t have the clothes in my house because we have moved the clothes to the storage unit at the old market” [Female, 38 years old, 15 years’ experience]

The above excerpt means that external cues such as illness of family members play an important role for promoting positive work behaviour. Because individuals are concerned about their family members' symptoms combined with the perception of benefits, i.e., separating clothes outside house is convenient and comfortable, they, then, make a decision to separate clothes in the wide outdoor space.

5.2.1.3 Using containing materials for containing clothes

Using containing materials, such as bags or boxes, for keeping clothes is the way to prevent spreading dust from the source, clothing dust spreading from the bales while separating clothes. From my observational data, piling clothes on the floor after separating them was the normal working pattern of second-hand clothing sellers. All informants as well as other sellers actually piled the clothes on the floor without any containing materials, such as sacks, boxes or bags. Therefore, the spreading of dust increased throughout the area particularly the area where the sellers were separating clothes and piling them on the floor while customers were selecting the piled clothes. This pattern seems like the routine of working process and using containing materials was not accepted as it looks odd. Also, they could not put the clothes into bags or boxes immediately because to do so is inconvenient and time-consuming. They usually wrap the clothes after finishing the process of putting clothes on hangers as they needed to prepare and arrange the goods for sale the next day. This is recognised as negative work behaviour but accepted because of the nature of everyday life.



Figure 54 Piling clothes on the floor while separating them

The process of negative work behaviour of second-hand clothing sellers, on the one hand, starts from the lack of risk perception influenced by cues to action. Because many informants have inadequate cues to action, i.e., lack of experience about respiratory problems from dust exposure and information from others, they perceived that the impact of dust exposure is no more than allergic symptoms, which affect only workers who have an allergy as a health condition. Also, the risk perception influences the perceived benefits of taking action, i.e., since they have perceived that the impact of dust exposure is not more than allergic symptoms, they, then, cease to look at preventive health behaviour such as wearing a mask as it is not crucial for them. Also, the perceived barriers, such as discomfort, are higher than the perceived benefits of taking action. Finally, the informants do not intend, or do not have adequate perceived self-efficacy, to perform positive work behaviour. These lead to the negative working behaviours such as exposing themselves to dust without a mask.

On the other hand the seller may have positive work behaviour if his/her perception of benefits is higher than the perception of barriers, for example, using a fan to create draught makes them feel more comfortable than working without it, or separating clothes outside the house is more convenient than separating clothes inside. Also, the cues to action such as the illness of family members play an important role in motivating the sellers to prevent health risks. Consequently, it is easy to understand why the sellers make decisions to perform positive behaviours such as separating clothes outside the house.

5.2.2 Work behaviours to prevent musculoskeletal problems

Second-hand clothing workers are exposed to many musculoskeletal problems due to incorrect working postures, for instance, lifting and moving the heavy goods beyond their unaided ability (each cloth-sack weighs 100 kilogrammes) or working with wrong positions (Sirithammaphan, 2011; Thongkoop, 2009). A range of studies reveal that lifting heavy weights is the most common health risk related to musculoskeletal problems (Jing et al., 2004; Kunda et al., 2013), especially lower back pain (Bern et al., 2013; Boschman et al., 2012; Govindu & Babski-Reeves, 2014) and disc herniation (Miwa et al., 2015; Sedighi & Haghnegahdar, 2014). Moreover, the workers may have

musculoskeletal diseases or injuries because of their awkward postures (bending, twisting, kneeling or squatting), i.e., wrong positions while sitting, standing, moving and lifting (Barrientos et al., 2010; Bern et al., 2013; Jing et al., 2004; Kunda et al., 2013; Ngan et al., 2010; Schneider & Irastorza, 2010; Wood, 2005). Consequently, working with proper lifting techniques and correct postures, for example, with back straight and elbows at right angles (90 degrees) while working, are necessary to avoid musculoskeletal symptoms, such as muscle pain (Gerr et al., 2004; Marcus et al., 2002).

The following section clarifies that the correct working behaviours to prevent musculoskeletal problems of the second-hand clothing sellers consist of working with the right postures, moving goods with proper weight and technique as well as using assisting tools. However, many observations revealed that this was not the case.

5.2.2.1 Right postures

I observed that almost all informants usually worked with incorrect postures. For example, their backs were not straight while tying the umbrella stakes, picking up goods from the floor or when separating clothes (figure 55). Also, they sometimes had repetitive arm and hand movements from putting clothes on hangers or hanging clothes as well as prolonged sitting from selling or separating clothes. Likewise, standing on tiptoe, squatting, twisting, bending down and looking up as well as not having their elbows at right angles were noted as common working behaviours while preparing, clearing their stalls or in the process of separating clothes. It is remarkable that these problematic positions as I mentioned earlier were present in every step of their working process in the markets.

“Actually I sit for 2-3 hours to button up and put the clothes on hangers using repetitive postures.....” [Male, 33 years old, 1 year’s experience]

“I sometimes had stiffness because I sat for 2 hours, quite a long time. I have to button up and put the clothes on hangers. I have to work using repetitive postures. So, I sometimes felt stiff in my waist or arms. Sometime I had waist or back pain” [Male, 43 years old, 23 years’ experience]

“I felt an ache in my legs and feet because of standing on tiptoe.

[Female, 44 years old, 15 years’ experience]



Figure 55 Doing work with incorrect postures

However, there were a few informants who tried to work with correct postures. It is noticeable that they had experienced the high impacts of musculoskeletal issues, for instance, getting severe back pain and being admitted to hospital.

“After I came back from hospital, I repeatedly thought about it a several times. I think that he [doctor] did not tell me [about herniated disc] because it is true. After that, I have made a decision to follow the doctor’s suggestions. I have changed my working behaviours; for example, I drop my knee and don’t bend my back when I want to pick up something on the floor, avoid standing on tiptoe, or that sort of thing. If you do it like this, you may think it is waste time, do you know what I mean? Some people bend their back when picking up something on the floor, it’s fast and convenient but they will feel pain in their backs. Now I don’t want to do that, I don’t mind about it being time consuming. I want to follow the suggestions from the doctor. At first when I followed his suggestions, I wore a back support as well” [Female, 43 years old, 18-19 years’ experience]

“Well, at that time, I lifted the heavy goods and put them on my pick-up tray. Then, I felt pain at my back. It’s like a back pain. The doctor told me I have Kra duk tab sen. He suggested to me that I have to avoid lifting heavy weights. It’s so dangerous. I have to be careful about this. I have to be concerned about my spine. I am sure that my health problems were from lifting heavy goods because

after I lifted them, I had back and waist pain. It was a severe pain. I felt pain even when I was walking” [Male, 59 years old, 20 years’ experience]

The above excerpts mean that physical and mental experience with regard to the high impacts of work on health such as admission to or treatment in hospital influences risk perception and worker’s decision on action taken to deal with work- related health problems. After understanding the disease and its impact, from direct experience, the informant then believes, accepts and is open to advice or suggestions from persons whom s/he credits, respects and trusts such as health providers. The statements from the informants’ interviews were compatible with his/her work behaviours observed and reported both in the markets and at homes. Moreover, it is noticeable that sellers with long-term experience in the market over years cannot change their working behaviours unless they have experienced the high impact of work-related health problems themselves and received information from others.

In conclusion, due to a lack of cues to action, lack of experience of illness and information about work-related problems from incorrect postures, most second-hand clothing sellers had insufficient perception of health threats as they did not perceive that working with incorrect postures affects their health more than having occasional muscle ache. And these symptoms are not a big concern. These also influenced the perceptions of benefits as the informants took no notice of the necessity of working with correct postures. Also, their perceptions of barriers, for instance, inconvenience or complexity, as described in chapter 4, were higher than the perceptions of benefits. For these reasons, the sellers did not attempt to work with the correct postures, unless they receive adequate cues to action, e.g., the manifest adverse health effects such as severe lower back pain, when, the perceptions of health threats are sufficient and influence the perceptions of benefits. When the perception of benefits is higher than the perception of barriers, second-hand clothing sellers will attempt to change their work positions.

5.2.2.2 Moving goods with proper technique

Because clothing bales are heavy, generally 100 kilogrammes each, the informants who moved the bales could not move the whole pack by lifting directly. Consequently,

rolling a bale was the most common practice to move the big bales from their transport to the houses. Actually, sellers of short standing did not have sufficient technique to move the bales. They could not move the bales themselves without any help from others as described by some informants of short standing.

“I cannot move the bale without help from my assistant because the item is so heavy. I used to move it myself, then after that I had back pain. So, I will work together with my assistant whenever I want to move the bale”

[Male, 41 years old, 3 years' experience]

Some sellers who have more experience regarding moving or rolling clothes could do this kind of work confidently without any help from others because they have the specific technique as explained by a few long-standing sellers.

“I have a technique for moving bales. We have to look at its shap. We can push it at the right angle. Then it will move quickly, don't wait until it stops, I can keep moving it until it reaches its destination”

[Male, 42 years old, 15-16 years' experience]

“..... I have a technique for moving a bale, just kneel a little bit and push a bale down on the floor, don't forget that you have to push a bale vertically. Then the bale will roll by itself 2 times. I don't do this process as others do who roll the bale horizontally because it is so heavy. We should push a bale when we are standing and push at the top of it just one time, no need to spend much power to roll it” [Male, 46 years old, 23 years' experience]

They also explained that they learned this technique from the skilled workers in the area.

“I saw this method from skilled workers at the big storage in Bangpoo. I noticed how they work because I think they did it so easily. They told me this method is easier to lift and moved the bales because I don't need much power to move it and can avoid using my waist. So, that's why I don't have much waist or back pain” [Male, 46 years old, 23 years' experience]

Experience of illness is one of the major factors contributing to the formation of second-hand clothing sellers' risk perception, and their decision on action taken to deal with work-related health problems. After experiencing work-related health problems such as muscle pain and its impact, seeking a way to prevent the disease enabling the ability to work vitally influences the choices of second-hand clothing sellers. Moreover, observing someone else such as a skilled worker performing positive work behaviours to prevent health problems can help the sellers to perform the same behaviours by imitation.

5.2.2.3 Proper lifting

Almost all informants had experience themselves and/or received information through interpersonal information sharing as well as media with regard to musculoskeletal issues. Thus they were aware of the weight of goods and gave precedence to this kind of work rather than other working process. From my observation, I noticed that all informants avoided lifting heavy items by, for example, putting their clothes to be sold into separate boxes or bags classified by its categories such as T-shirt, pants, long sleeves, and jeans as well as their grade or price, not only for more convenience, but also for reducing the weight of the goods.

“For me, heavy weight lifting is so dangerous. We can have [health] problems from it especially stiffness, back pain even problems with our spines. I’m not sure about spines but I think we probably can. I am concerned about this. So, I have to avoid lifting heavy goods. I’m serious about this. If the goods are heavy, I don’t hesitate to call for help” [Male, 48 years old, 18 years’ experience]

“I used to lift the heavy goods and have back pain. It was a severe pain, I needed massage. So, I made a decision to hire assistants. They can lift the heavy goods instead of me. I noticed that some couldn’t be patient with the back pain as well as muscle strain. They can’t continue their work because of the pain. So, they need to have massages until they got well” [Male, 41 years old, 3 years’ experience]

“Previously, I often lifted heavy goods. Then I got an impact from this. I have lumbar problem. When I finished the treatment, I have avoided lifting heavy goods since then. I try to avoid lifting it by putting the clothes in smaller bags and boxes. It’s not too heavy. I now also have an assistant who has to lift the goods instead me. If he doesn’t come, I will pay for others to lift the clothes instead me, sometimes I pay 50-100 bath (£1-2) for only lifting. Nowadays I pay 200 THB (£4) for working 3 hours. It’s a good rate”

[Male, 59 years old, 20 years’ experience]

“[After having “Klam naer ak seb” (Myositis, Muscle Strain or Polymyositis)]. He [doctor] suggested to me that I have to avoid lifting heavy goods. He also told me if I lift the heavy goods often, I may have herniated disc. If I have it, I will suffer from severe pain and need to have surgery. He also told me that if I have surgery, I won’t get back to normal. I mean that, for example, I can’t walk as I can now or I can’t walk with a normal posture. He told me that because “herniated disc” is related to a nerve. I am so concerned about this. Furthermore, I have to avoid lifting heavy goods because I don’t want to have the disease” [Male, 59 years old, 20 years’ experience]

The above excerpt illustrates that second-hand clothing sellers are not concerned about musculoskeletal issues due to incorrect postures and lifting techniques until physical problems are manifest and threaten their routine of daily life including the ability to take the job further. After they have experienced these health issues, they make the decision to change their work behaviour so that on the whole risk is minimised.

In conclusion, because of internal cues or personal symptoms such as lower back pain, second-hand clothing sellers perceive the impact of moving clothing bales with the excessive weight and incorrect technique as this can cause musculoskeletal symptoms especially lower back pain. In the eyes of most informants, lower back pain is not a big concern; however, if the symptoms affect their routine of daily life, the informants then take action to seek a way to prevent the disease reducing their ability to work.

The findings in this section also reveal that although the perceptions of benefits of moving bales with correct techniques between long-standing sellers and short-standing

sellers are not different as most of them perceived that correct technique is useful for them to prevent back pain, their perceptions of barriers are different. This means that the barriers with regard to moving bales with the correct technique are lower for sellers of long standing than for those of short -standing due to the better skill, i.e., the more experience the more skill. In order to avoid heavy lifting, the short standing sellers seek a way to avoid heavy lifting by hiring an assistant who can lift heavy goods instead them as they perceive that the barrier of financial cost is lower than the barrier of working with correct techniques or postures.

5.2.2.3 Using assisting tools

Some informants used long hanger hookers as tools to assist hanging clothes because of their convenience. The tools were made from plastic materials or wood (figure 56).



Figure 56 Long hanger hookers

They said that they prefer to use the long hanger hookers for hanging clothes for its convenience. Also, it can prevent muscle aches as they can avoid standing on tiptoe while hanging clothes.

“Umbrella stretchers are high, so I have to use this tool (a long hanger hooker) for hanging clothes. If I don’t use it, I have to stand on tiptoe and will have muscle aches” [Female, 39 years old, 18-19 years’ experience]

The above excerpt reveals that even though the probability of health problems that the informants perceived is only muscle aches whose impact is not a matter of great concern, they prefer to use a tool rather than stand on tiptoe for hanging clothes. This is because their perception of benefits is higher than their perception of barriers, i.e., using a tool seems to be more necessary and convenient for the sellers rather than it is difficult to use. These lead to the motivation and intention to use long hanger hooks for hanging clothes especially on high clothing racks or umbrella stretchers.

In conclusion, the statements above demonstrate that cues to action – suffering from musculoskeletal issues – influence of second-hand clothing sellers' perceptions of risk as they perceive the adverse effects of negative work behaviour, for example, that heavy lifting causes severe pain and herniated disc. If the health issues affect the workers' routine of daily life and make them feel concerned, they then seek a way to prevent the disease reducing their ability to work and their perceptions of benefits are followed. However, to change work behaviours, the perceived benefits must be higher than the perceived barriers because perceived benefits influence intention to change behaviour, while perceived barriers, such as discomfort, influence negative work behaviour directly. Furthermore, the perceived barriers with regard to moving bales with the correct technique of sellers of long standing are lower than the short-standing sellers due to the better skill, i.e., the more experience the more skill. This finding suggests that for health promotion practice that different strategies are needed for different groups of second-hand clothing sellers according to cues to action and risk perception. Finally, it is a challenge for promoting health, especially changing behaviour in terms of working with correct postures, to prevent musculoskeletal issues for second-hand clothing sellers, as the adverse effects of negative working behaviours, such as incorrect postures, does not manifest themselves until they produce symptoms that worsen over time and require treatment in the health services. Then overall, serious problems which prevent work are important in changing behaviour.

5.2.3 Work behaviours to prevent skin problems

The health threats related to second-hand clothing sellers' skin problems of can be seen in the jobs of washing clothes (from washing-up liquids or fabric washing) and

clearing stalls (from strong sunlight). With regard to the harmfulness of washing liquids, the components of laundry detergents, such as silicates, bleaches and surfactants, can influence skin problems such as skin irritation depending on their conditions (duration, frequency and concentration) (Kiryama et al., 2003; Kwon et al., 2009). Also, some ingredients in washing-up liquids or laundry detergents, such as certain fragrances, may cause skin sensitisation (Api et al., 2008; Bajpai & Tyagi, 2007; Kirkup, 2011; Magnano et al., 2009; Yazar, 2011) and consumers or workers can experience repeated exposure leading to contact allergy if they use such products several times per day (Kiryama et al., 2003; Kwon et al., 2009; Yazar, 2011). The workers should protect themselves from the harmfulness of laundry detergents or washing-up liquids by wearing gloves (Magnano et al., 2009) and preparing some water for cleaning areas which are contaminated by laundry substance (Sirithammaphan, 2011). However, from observational and interviewed data, workers skipped the step of washing clothes because they found it time-consuming. Consequently, there is only one working process related to skin problems: clearing the stalls, which involves exposure to strong sunlight.

With regard to work-related health problems due to ultraviolet (UV) exposure, these happen because strong sunlight commonly has an influential effect on the skin, and UV radiation is an important cause of skin cancer (Besaratina & Pfeifer, 2008; D'Orazio et al., 2013; Halliday et al., 2008; Reinau et al., 2013; Sarchio et al., 2012; Sies & Stahl, 2004). And, also, UV radiation is also an important cause of other skin disorders such as sunburn| and photodamage (Sies & Stahl, 2004; Simpson, 2008). The workers should protect themselves against strong sunlight by using personal protective equipment, such as hats (Hyatt et al., 2010; Kobayashi, 2005; Safety & Council, 2008; Turner & Parisi, 2013), long sleeved shirts, long trousers or skirts, as well as using sunscreen (Hyatt et al., 2010; Safety & Council, 2008; Turner & Parisi, 2013). For best protection from strong sunlight, they should not rely on personal protective equipment alone. For example, the use of a hat and sunscreen together is preferable to the use of sunscreen alone (Safety & Council, 2008).

5.2.3.1 Using hat as personal protective equipment to protect against strong sunlight

Preparing and clearing the stalls under strong sunlight without using hats was common work practice among the second-hand clothing sellers in the markets. Most of them who have to face the sunlight refused to use hats while exposed to the sun as it made them feel inconvenient and awkward. Also, they felt familiar with the heat from sunlight as the weather of the southern part of Thailand is commonly very hot [around 30-40 degrees Celsius in summer].

“I prefer to work without a hat because it [wearing hat] makes me feel uncomfortable while working. I am used to the hot weather. It’s not a serious problem, just hot” [Male, 33 years old, 1 year’s experience]

Only a small number of informants used hats as personal protective equipment to protect themselves from skin problems such as skin irritation and sunburn.

“I feel comfortable when I use it [sunglasses and hat] while working under strong sunlight. I feel familiar for using it. I can say that it is necessary for me and I don’t want to work without it” [Male, 48 years old, 14 years’ experience]

“I feel uncomfortable if I face to the strong sunlight directly. So, it is better to wear hat, because when I wear it, I feel more comfortable”
[Male, 24 years old, 1 year’s experience]

Even though of the first and second informants’ above experience of work was different, the first informant’s experience being 14 years while the second informant’s experience was only 1 year, preventive health behaviours to prevent the exposure of both informants to sunlight was not different. The interview statements from both informants illustrate a linkage between preventive health behaviour and the perceived benefit of taking action as they perceived that hats can protect them from direct strong sunlight-related skin issues, such as skin irritation and sunburn. Because their perceptions of the benefits of using a hat were higher than their perceptions of the barriers, they had sufficient motivation and intention to use a hat to avoid the skin issues which make them feel uncomfortable.

5.2.3.2 Using long sleeves to prevent strong sunlight

According to Islamic practice, a Muslim female has to wear a long-sleeved shirt or dress as well as a hijab to cover the body except the face, the hands up to the wrists and the feet. Consequently, all Muslim women who participated in this study wore clothes following the Islamic rule as above every time they leave home.

“I wear long sleeves every time I stay outside [from my house], it’s because I follow the Islamic rule. No matter, I have to face the sunlight, I have to wear it even in a good weather” [Female, 39 years old, 15-16 years’ experience]

The male sellers, all informants, both Muslim and Buddhist sellers, did not always wear long-sleeved shirts while working in the markets. Following the Islamic rule, wearing a long-sleeved shirt is not compulsory Islamic practice for men. Therefore, wearing short-sleeved shirt or T-shirt is one of the normal working behaviours of the Muslim male sellers in this study. Furthermore, both Muslim and Buddhist male sellers preferred to wear T-shirts because of their greater convenience.

“I prefer to wear a T-shirt while working because it makes me feel more at ease and comfortable. It can also release the sweat from my body. I think other sellers prefer wearing short-sleeved shirts especially T-shirts”
[Male, 42 years old, 15 years’ experience]

My observations indicated that the second-hand clothing sellers felt familiar with the strong sunlight, as the weather of the southern part of Thailand commonly is very hot, and they were often repeatedly exposed to strong sunlight, not only from their work but also from their routine and daily life. Consequently, preparing and clearing the stalls under strong sunlight without using hats or long sleeves was the common work behaviour of the second-hand clothing sellers in the markets. Also, they were not seriously concerned regarding the health issues from sunlight. For this reason, most of them who are exposed to the strong sunlight refused to use hats while exposed to the sun.

Regarding wearing long sleeves, all female Muslims wore a long-sleeved shirt or dress as well as a hijab to cover the body, following Islamic practice. Also, the main reason for wearing long sleeves was not because of preventive health behaviours. While the male Muslim and Buddhist sellers do not need to wear long sleeves as this is not compulsory. Therefore, wearing short-sleeved shirts or T-shirts was one of the normal working behaviours of the Muslim male as well as Buddhist sellers.

The data from interviews and observations illustrate a linkage between risk perceptions and perceived benefits including barriers to taking action and preventive health behaviours of second-hand clothing sellers as in their perception the impact of UV exposure is not more than feeling hot, uncomfortable and with irritated skin. Also, the sellers feel familiar with UV exposure as they are often repeatedly exposed to the strong sunlight. Moreover, the perceived barriers of wearing hat and long sleeves, except for Muslim women, are higher than the perceived benefits; thus, most of them refuse to use hat and long sleeves to protect themselves from UV exposure while working under strong sunlight.

5.2.4 Work behaviours to prevent eye problems

Many second-hand clothing sellers are often exposed to strong sunlight because they usually sell clothes at daytime markets. The important threat is ultraviolet radiation (UV rays) from strong sunlight (especially from 10.00 a.m. to 2.00 p.m.) which can cause serious eye problems from ongoing exposure (Lehman, 2011; Newswire, 2012). Many studies have revealed the strong relationship between UV exposure and pterygium (Maharshak & Avisar, 2009; Rezvan et al., 2012; Wlodarczyk et al., 2003), pinguecula (Karpecki, 2012; Mimura et al., 2011; Rezvan et al., 2012), cataract (Reinau et al., 2013; Roberts, 2011) and ocular neoplasm (Reinau et al., 2013). The sellers also often separate and grade the clothes at night with low brightness. So, they might have any eye problems especially eye strain from many possible causes, such as inadequate light (Woods, 2005). Workers should use sunglasses to prevent UV exposure (Sendall, 2013; Turner & Parisi, 2013) and work in areas which can be reached by sufficient brightness especially at night (Walls et al., 2011).

Most informants did not say whether they have any health issues related to eye problems, while only a small number of informants stated that they have eye problems in terms of health conditions, such as eye irritation and eye strain due to the different causes, for example, dust, sunlight and prolonged staring. According to the observational data, the sellers who work in the daytime markets – the Budee and Coconut markets – were exposed to health risks related to eye problems, particularly strong sunlight. However, they actually worked by selling clothes without using personal protective equipment such as sunglasses as they thought that eye problems from work exposure are not a matter of great concern. Also, feeling awkward was one of the main reasons for working without using sunglasses.

“I never use it [sunglasses] and don’t want to try to use it. I will feel shy and unconfident. I think my friend will tease me if I wear it”

[Male, 46 years old, 23 years’ experience]

“I have sore and watery eyes sometimes when I am exposed to the strong sunlight. I don’t use sunglasses because I am concerned that others might think I am pretentious” [Female, 39 years old, 10 years’ experience]

“I didn’t wear it [sunglasses] although I have pinguacula because I felt awkward. I still OK and have enough tolerance for it. I prevent my eyes from sunlight by closing the mirrors when I drive a car and avoid having contact with the wind. I have eye irritation sometimes, not all times. So, I think it’s not a serious problem” [Male, 46 years old, 23 years’ experience]

“I think it is inconvenient for me and I will feel uncomfortable (from wearing eyeglasses). And above all, I probably couldn’t see the clothing defects clearly”
[Female, 39 years old, 18-19 years’ experience]

The above excerpts reveal that although the potential eye problems from sunlight exposure are manifest, second-hand clothing sellers still work without using personal protective equipment if their perception of barriers is higher than their perception of benefits. It means that perception of barriers is the main reason for negative work behaviour. Barriers in addition to lack of cues seem to be important in this instance.

In conclusion, due to the lack of cues to action as they had not experienced illness themselves or received information from others about eye problems from sunlight exposure, most informants perceived the impact of UV exposure as no more than hot or uncomfortable. Also, because of their familiarity with the hot weather combined with the high perceived barriers to using personal protective equipment, they preferred to work without wearing sunglasses. Moreover, despite the fact that some informants recognized their susceptibility to eye problems from UV exposure, such as eye irritation, eye strain and pinguecula, they still had negative work behaviours as they refused eye protection. This is because they lacked any perceptions of the severity of the potential problems, as they considered that eye problems are not a matter of great concern, combined with their high perceptions of the barriers to using personal protective equipment: they did not attempt to prevent themselves from UV exposure.

5.2.5 Work behaviours to prevent accidents/injuries

Second-hand clothing sellers are at risk of accidents or injuries while travelling to the markets by transports such as pick-up trucks or motorcycles with sidecars in the course of buying or selling goods. Also, some parts of the relevant tools are sharp, for example, the tips of market umbrellas and wires, that may cut the workers if they are careless or do not use personal protective equipment such as gloves. Moreover, there are some causes of accidents and injuries from working conditions, for instance, when stabbing down the iron stake for establishing the market umbrellas (Sirithammaphan, 2011; Thongkoop, 2009). Consequently, preventing accidents and injuries is necessary for second-hand clothing sellers, for example, using gloves while touching sharp materials.

The following section illustrates behaviours to prevent accidents or injuries to second-hand clothing sellers, consisting of work behaviours to prevent accidents in cars or sidecar motorcycles, limitations for loading as well as behaviours to prevent wounds or bruises. The details of their preventive health behaviours are as follows:

5.2.5.1 Work behaviour to prevent car accidents

Most informants, who normally have to travel from or to the different cities for buying clothes or selling clothes, clearly stated the necessity of wearing a seatbelt that influences their preventive behaviours. Also, the preventive behaviours were associated with personal experience and information through media.

“Well, dust is dangerous as it will accumulate slowly in our bodies. So it seems like dust is not seen as dangerous as it is. While we can see dangerous accidents for ourselves or through the media, it’s so terrible. Last time I heard the news on TV, a car collided with a power pole and the crash led to a car fire. All the passengers were dead. I am so scared about a car accident because I often hear a lot of news about accidents. So, I have to wear a seatbelt every time when I travel for a long distance” [Female, 38 years old, 15 years’ experience]

“I used to experience [car] accidents a long time ago. I saw someone pulled from a car and they were dead. It was a collision between two cars. The guy did not wear a seat belt. At that time, I didn’t have a car yet. When I bought my car and owned it, I intended to wear a seat belt all the time while driving because I have a fear of accidenta. And...you know, I also used to know someone who wore a seat belt. The car flipped over several times but he was OK. I noticed that he wore a seat belt. He did not have any injury or even a scratch. I think that his body was fixed to the car seat because he wore the seat belt. So, I really intend to wear it every time I drive a car even for a e short distance”
[Male, 46 years old, 23 years’ experience]

“.....The crooked road is so dangerous especially at the Lamplai road. Some of my friends died on this road. I have to be careful, couldn’t be careless. And above all, I have to wear a seatbelt to protect myself so my body is able to drive”
[Male, 59 years old, 20 years’ experience]

“I’m so concerned about this [travelling long distances], especially accidents. I have to be careful while driving and always use a seatbelt because I used to see accidents on the road while I was travelling. Previously, I didn’t wear it until I

experienced it myself. I think this is because I often go to Sungai ko-lok on the highway. So, I can see accidents during a journey. I don't want to have an accident like that, so, I have to protect myself"

[Male, 42 years old, 15 years' experience]

Some informants who wear seatbelts sometimes or rarely had different view regarding the reasons why they do not wear seatbelts every time they travel. The statements below are related to his barriers to wearing a seatbelt.

"Actually, I don't wear a seatbelt because I feel uncomfortable. Previously when I lived in Bangkok, I often used it because of the compulsory regulation. But when I live in Patani, I have not often used it like I did in Bangkok. I think it's quite awkward. Moreover, there are not a lot of cars in this area"

[Male, 48 years old, 18 years' experience]

The above statements show that internal cues through personal experience and external cues through information from others, including the mass media, with regard to the high impact of accident/injury, particularly fatal accidents, may influence second-hand clothing sellers' risk perception. After perceiving the probability of being in an accident and the high impact of driving a car without a safety belt, these perceptions of health threats inform the high perceptions of benefits as they believe that using safety belts can protect them from fatal accidents. Also, the data illustrates the linkage between perceived benefits of the seat belt to protect a driver from fatal accidents and the confidence or self-efficacy of wearing a seatbelt (i.e., they felt safe while wearing a seatbelt every time while driving). Consequently, most informants having sufficient cues and risk perception actually wore the seatbelts to protect themselves in car accidents.

5.2.5.2 Work behaviours to prevent accidents from motorcycle with sidecar

Only a small number of informants used motorcycles with sidecars for selling second-hand clothes. It is interesting that none of them wore helmets to prevent motorcycle accidents. They shared the similar point of views as they felt uncomfortable and awkward while using the helmets. They stated that they do not ride far from home, and

they ensure that they will not have serious accidents due to the speed limits in the area. It is remarkable that wearing a helmet was not compulsory in these areas.

5.2.5.3 Limitation for loading

According to of loading limits regulations in Thailand, the weight should not be over 1,100 kilogrammes for the pick-up truck and 500 kilogrammes for sidecar motorcycles, and the loading height (from the ground) should not be over 3 metres for a pick-up truck, although the height is not mentioned for motorcycles with sidecars. All informants followed the regulations as the loaded weight of goods in their pick-up trays as well as sidecars were not above the limitations mentioned above. This is because the clothing items were not very heavy, approximately 10-25 kilogramme per one bag/pack, 10-20 bags/packs for loading with one pick-up truck and 5-8 bags/packs for loading with a motorcycle with sidecar. In addition, because their stalls were not big as well as because they had limited time – 3-5 hours – for selling clothes, and some of them kept some goods within their stalls by containing them in boxes or covered with canvas (figure 57), consequently, they did not need to carry too many clothing items for sale in the marketplace.



Figure 57 Keeping clothes in the stalls

Regarding the load of clothing bales, most informants who buy the bales from the wholesalers actually loaded the goods into the pick-up trays, approximately 2-6 bales per pick-up tray, or just only one bale for the sidecar (of a motorcycle). They could not buy many goods from the wholesalers because the quantities of clothing bales are not

enough compared with the demand of the sellers. Also, some of them stated that overloading the pick-up truck while driving may cause a car accident.

“As I told you, each pack of goods is so heavy. It’s around 100 kilogrammes. I think the weight of goods will be 1,000 kilogrammes if I buy and move the 10 items with my pick-up truck. I prefer to load just 6-7 items each time. You know, the goods are so expensive. It’s around more than 10,000 baht (£200). If I buy 6-7 items, Oh, try to measure it, it might be 70,000-80,000 baht (£1,400-1,600). So, we have to be careful when we move the goods because if we have an accident, it will have a big impact not only because we will have an injury but also we will lose a lot of money” [Female, 38 years old, 15 years’ experience]

“I have to be careful while moving clothes. The height of the goods in the sidecar must not higher than my (eye) sight. If it is too high, I can’t see the road clearly and could easily have an accident. It’s so dangerous; if I have an accident because I am careless, I will be charged by a policeman”

[Male, 28 years old, 3 years’ experience]

The above excerpt illustrates that second-hand clothing sellers perceived that transporting clothes without care causes accidents and injuries. These accidents may affect them not only with physical consequences, such as pain, but also he social consequences, such as money lost. These impacts link to the perceptions of benefits as the informants perceived that transporting goods with care and awareness of loading can protect them from physical and financial impacts. Also, due to a lack of perceived barriers, i.e., it is not necessary to load too heavy goods as they have only limited time for selling clothes as mentioned earlier, perceptions of benefits are higher than perceptions of barriers. This leads to high self-efficacy to be aware of loading weights and be careful of accidents.

5.2.5.4 Behaviours to prevent wound or bruise

Second-hand clothing sellers may risk getting wounds or bruises from several working conditions, including hammering umbrella poles, installing or keeping the market umbrellas as well as cutting wires wrapped around the bales. From observations and

interviews, it can be seen that some of them were concerned about accidents or injuries from working conditions due to personal direct experience and/or information about work-related injuries.

“I made a mistake when I was hammering. I was hit by the hammer and had a bruised thumb. Once, the head of the hammer bounced off and hit my leg because the hammer did meet quality standards. After I had the accidents, I had to be careful and bought a new hammer. The new one is better quality”

[Male, 42 years old, 15-16 years’ experience]

“I used to make a mistake when I was hammering. I will have accidents all the time if I’m not careful. Even though it was not a big problem [accident from hammering] because it was just a bruise and I didn’t have to see a doctor or buy medicine for this, I still have to be careful with this kind of work”

[Male, 49 years old, 18 years’ experience]

“It’s dangerous [for hammering an iron stake]. But I never have an accident from hammering because I hammer the iron stakes slowly. I have to be careful because if I am careless, I might have accents such as a bruise or wound. My friend used to have accidents [from hammering], it’s so dangerous”

[Male, 29 years old, 9 years’ experience]

The above excerpt means that second-hand clothing sellers tended to perceive minor accidents and injuries as a part of their job. Then they made the decision to eliminate and isolate the causes or minimise the possibility of accident based on their understanding.

For this reason, informants who have been exposed to accident and injury while working mentioned the same opinions as they have to be careful while hammering or cutting wires, while some of them also talked about the necessity of good quality tools for cutting wires or hammering to prevent accidents or injuries. It is remarkable that they did not pay attention to personal protective equipment, particularly gloves, for preventing accidents while attending to the wires or iron stakes. Also, practically no informants used gloves while hammering, cutting wires as well as installing the

market umbrella except an informant of 9 years' experience who had used gloves while preparing and clearing stall for over 1 year.

“I wear them [gloves] because I’m concerned about rust and splinters. One time when I had a splinter wound, I took the splinter out and took medicine which I bought from a drug store. Once I had recovered, I have used gloves or clothes that covered my hands and fingers since then. I don’t want to be in contact with umbrella poles without it” [Male, 29 years old, 9 years' experience]

And, also

“It [gloves] is really necessary for me. I have to use it to prevent splinter wounds from the umbrella poles. Once, when I didn’t use something to protect my hand, I had a splinter wound. I felt pain for several days”
[Male, 29 years old, 9 years' experience]

The above excerpt means that experience of work-related accidents/injuries leads to positive work behaviour of second-hand clothing sellers. When an individual believes that negative work behaviour such as working without personal protective equipment causes work-related accidents/injuries and the impact of accidents/injuries affects the ability to carry on working, s/he tends to minimise the occurrence of the problem by positive work behaviour.

The findings show that both internal and external cues influence second-hand clothing sellers' risk perception as they are concerned about accidents and injuries which can occur while working. They then seek a way to reduce the possibilities of work-related accidents/injuries and the perceived benefits of taking action are followed. For this reason, risk perception influences the perceived benefits of taking action. To perform positive work behaviour, the perceived benefit must higher than perceived barriers. It means that when perceived barriers are higher than perceived benefits, work behaviour of the seller seems to be negative. For example, informants perceived that wearing gloves can prevent splinter wounds; however they refused to use gloves to prevent them because of the inconvenience. When the perceived benefit is higher than the

perceived barrier, second-hand clothing sellers have the intention and confidence to change their work behaviour and then, positive behaviour will appear.

In conclusion, the findings in section 5.2, preventive health behaviour of second-hand clothing sellers, as anticipated illustrated the relationship between the six key concepts of HBM and work behaviours. However the results initially show that there are complexities regarding cues to action, through personal symptoms and information from others including highly relevant mass media, influence the other components of HBM: risk perception influences perception of benefits, perception of benefits influences perception of self-efficacy, with nuanced findings in relation to various occupational risks and the impact of these risks on the ability to work. These relationships are explored precisely in the next section, topic 5.3, the relationship between second-hand clothing sellers' beliefs and their preventive health behaviour.

5.3 Relationships between second-hand clothing sellers' beliefs and their preventive health behaviours

The findings reveal that the six key concepts of HBM, perceived susceptibility, severity, benefit, barrier, self-efficacy and cues to action, are all observably present and influence the working behaviours of second-hand clothing sellers. In this section, after considering the relationship between each and all components of HBM and working behaviours, I explain this relationship, with further detail as follows:

The first concept in the HBM theory is "*perceived threat*" or "*threat perception*" or "*risk perception*" (i.e., perceived susceptibility combined with severity of health problems). The current results reveal that informants who saw their working conditions as risky or threatening usually had positive working behaviours. Conversely, informants who perceived working condition as non-threatening or with insignificant harmful effects, for instance saying, "work affects only people who have health conditions or limitations", "health problems are an inevitable part of that work" and "the impact of health risk is not a matter of great concern", commonly had negative working behaviours.

Nevertheless, a few informants who perceived their vulnerability and the severity of health risk still had negative working behaviours because of some barriers, for instance, that the positive behaviour was uncomfortable, inconvenient, complicated, and time-consuming. They did not change their negative working behaviours unless an adverse health effect was manifest and threatened their routine of daily life including the ability to continue the job.

“Well, my friend...he is a seller too. He was admitted to hospital 4 years ago. He had a chest tube inserted for drainage. He was pierced in this area (he pointed at his ribs). I think because he worked at this job for a long time, around 10-20 years. Before he had the problems, he never used a mask. He felt pain in his chest and it was difficult to breath. When he was admitted, the doctor told him that he had problems with his lungs but I don’t know about the treatment. I told you as I saw and remember it” [Male, 41 years old, 20 years’ experience]

And, also

“I know [the problems were from this job] because they [health care providers] asked him about his job. When they knew what job he has, they told him that it was because he was exposed to dust by not wearing a mask while separating clothes. After that, when he recovered from this, he has had to use a mask all the time while facing clothing dust. After I visited my friend, I still did not use a mask to prevent dust. But I thought about a mask. I thought that I will use it but at that time, I was lazy and thought that it is inconvenient”
[Male, 41 years old, 20 years’ experience]

The above statements reveal that the informant perceived the susceptibility and severity of clothing dust as it may be the cause of lung disease. He also perceived that he would get unfavourable effects such as difficulty in breathing or severe chest pain because of dust exposure. However, his work behaviour was still negative because of his perception of barriers.

After witnessing his friend's lung disease from dust exposure for around two years, he then had some symptoms which made him feel concerned. Finally, he made a serious decision to use a mask after having the symptoms 2 years ago.

"I made a decision to use a mask because of my symptoms. As I told you, I have some symptoms like having tightness in my chest and difficulty breathing while in contact with [clothing] dust. When I initially had symptoms (2 years ago), I didn't have any hesitation and made a decision to use it since then"

[Male, 41 years old, 20 years' experience]

From my observation, during the time in the market particularly while separating clothes, he actually wore a mask all the time when he was exposed to clothing dust. Following the above statements, even though he already perceived the threat due to his friend's experience, he still had negative working behaviour because of the high *perceived barriers* of taking action on preventive health behaviour. Also, initially, there were not sufficient cues to action, i.e., he did not have serious symptoms, as well as not being provided with health education by others. Consequently, he still did not make a decision to change his working behaviour, yet he thought about mask in his mind. For this case, it can be concluded that even though his perception of health threats, perceived susceptibility plus severity, is strong as he witnessed the high impact of dust exposure on his friend who was admitted to hospital, he still could not change work behaviour to use a mask. This is because his cues to action were not sufficient for establishing strong motivation to take action as he experienced his friend's lung disease only once while visiting him in the hospital. Also, he did not have negative symptoms and was not convinced by others. For these reasons, his risk perception combined with cues to action influencing the perceived benefits of taking action could not overcome the perceived barriers of wearing a mask, and these components did not have sufficient influence to change his behaviours. According to the informant, two years after he had witnessed his friend's experience, his internal cues were increased because he had some respiratory symptoms, chest tightness and breathlessness. These cues, his symptoms, combined with his perception of health threats, had adequate influence to increase his motivation and self-efficacy to change work behaviours to reduce his symptoms or eliminate the health issues.

Another female informant of long standing held a similar opinion about the perceived barriers of wearing a mask. Although she had similar symptoms to those of the previous informant, chest tightness and breathlessness, and was informed about the impact of clothing dust as allergic symptoms, she had never experienced the high impact of dust exposure from others like the previous informant, who had witnessed his friend's lung disease. She started her experience by having a negative impact from dust exposure with some symptoms, chest tightness and breathlessness, after performing the job for 14 years. She has tried to use a mask while separating clothes for a year since she initially had the unfavourable symptoms. Nevertheless, wearing a mask made her feel really uncomfortable and she could not use it continuously.

"I try to wear a mask every time when I separate clothes but I can only wear it for such a short time, around 5-10 minutes. Then I have to take it off because I really feel uncomfortable. However, I still try to wear it every time when I am exposed to dust because I have started to have some symptoms"

[Female, 38 years old, 15 years' experience]

The above excerpt demonstrates that because the informant perceived the impact of dust from her direct experience (present illness), perception of benefits occurred as she sought a way to prevent herself from contacting dust. She then tried to change her work behaviour while contacting dust by wearing a mask. However, she still had negative work behaviour because her *perceived barriers* such as feeling uncomfortable, which influenced her directly towards negative work behaviours, had more influence than the perceived benefits. For this reason, the seller did not have sufficient self-efficacy to perform positive work behaviour.

"It's quite a long time [for trying to wear a mask] but still not successful yet. I know it [mask] can protect me from dust and disease but I don't like it because I feel really uncomfortable and awkward every time when I use it."

[Female, 38 years old, 15 years' experience]

Although the two informants had similar signs and symptoms (i.e., chest tightness and breathlessness), their work behaviours were different. This is because the risk perceptions of the two informants were different. The first informant, who uses a mask

regularly while exposed to dust, perceived a health risk from dust as it possibly can be the cause of lung disease and its impact is high because he had witnessed his friend's high impact, whereas the second informant, who cannot overcome the barriers of wearing a mask although she has explicit symptoms, perceived her health issues as the symptom of dust allergy which does not have as high an impact on her as that of the first informant's perception as lung disease. Finally, because the perception of health threats of the first informant is higher than the second informant along with the cues to action as personal symptom, the first informant has more opportunity to overcome the perceived barriers of wearing mask than the second informant.

Regarding the *perceived benefits and barriers* to preventive health actions, the findings reveal that perceived barriers was the most important component affecting negative working behaviours of second-hand clothing sellers. Most informants stated the reasons of negative work behaviours linked to the difficulty of practice, for example that it was uncomfortable, inconvenient and complex. The findings also reveal that an informant who has a high perception of benefits, influenced from risk perception, rather than of barriers has more influence to increase self-efficacy or intention to change their work behaviours. Because risk perception influences perception of benefits, a second-hand clothing seller with higher perception of risk has a higher perception of benefits as well as the examples from informants of short and long standing.

“Initially, I felt uncomfortable when I just started wearing a mask but when I used it continually for a long time, then, I felt normal... Even though I sometimes felt uncomfortable, I didn't want to take it off because I am concerned about diseases. So, at that time I had to be patient because I am concerned about diseases rather than feeling uncomfortable”

[Female, 38 years old, 15 years' experience]

The above statement demonstrates that an individual having a high risk perception also has a high perception of the benefits of wearing a mask, influencing her self-efficacy to take an action. When perception of benefits is higher than perception of barriers, she then has enough motivation to change her behaviours.

“When I tried using a mask at the beginning, I felt very uncomfortable. I also felt sweaty and hot. I think that it’s normal for the first time because I wasn’t familiar with it. Sometimes when I felt very uncomfortable, I had to stop my work for a while. I had to go outside and take it off until I felt better. Then I returned to separate clothes again. At present, I feel familiar with it. I have to find it [mask] before I will separate clothes. Although I sometimes feel uncomfortable, I still need to wear it whenever I have to separate clothes because I love my health and need to prevent diseases [she also mentioned lung disease from dust exposure]” [Female, 45 years old, 7-8 years’ experience]

The previous excerpt demonstrates that an informant who could overcome barriers of wearing mask needs to have high confidence or “*self-efficacy*” to change behaviour. This means that individual who has the confidence to take action tends to overcome perception of barriers and be able to continue positive health behaviour. Also, risk perception is an important component influencing perceived benefits to outweigh barriers. This can be explained that because the informant had a high risk perception of dust exposure due to adequate information, she was concerned about work-related lung disease and sought the way to prevent herself from the health issues. After she perceived that wearing mask can prevent her from respiratory problems, especially lung disease, she then had the confidence or efficacy to wear a mask to minimise the health risk related to lung disease. After having the confidence of wearing mask, she tended to overcome the barriers of using it and continued performing positive behaviour until the completion. Remarkably, even though her perception of barriers was not different from that of other informants, her perception of benefits was higher than that of those who perceived the impact of dust exposure as not more than allergic reactions. When the perception of benefits was higher than perception of barriers, an individual tended to perform positive work behaviour because of high self-efficacy to prevent him/herself from the health problems.

Finally, with regard to the last component of HBM, “*cues to action*”, the findings reveal that cues to action were the most important component of HBM influencing positive work behaviours among second-hand clothing sellers. All informants who have positive work behaviours mentioned either or both motivation from bodily

events, such as symptoms, and environmental events, such as information from others, that affect their decisions to change their work behaviours.

“Previously, I didn’t have concerns about postures. I thought that it is a small problem until I was admitted to hospital. After that I have realised it’s dangerous. I had to spend money when I was staying in the hospital. I also wasted time and my health was poor. I think that if I work with the right postures, I wouldn’t be admitted to the hospital like this. I have been concerned about this since I was admitted to hospital. I have known what severe pain was. I suffered from the pain while I stayed in the hospital. I am willing to take care of myself. I don’t want my family to keep vigil over me while I am sick again. If I don’t change my behaviour and don’t follow the doctor’s advice, I might have to go to hospital again. Is it worthwhile? A doctor said that if I have a herniated disc, I will need to have surgery and will have to stay in hospital for several days. He asked me do you believe me. I said that I believe you. I truly said with him” [Female, 43 years old, 18-19 years’ experience]

The above excerpt demonstrates that internal cues or personal symptoms such as severe pain and external cues such as suggestions from health professionals may increase individual risk perception and motivate the individual to change work behaviour in the context of the second-hand clothing sellers’ market. As described in chapter 4, cues to action shape individual knowledge that influences not only risk perception but also all the components of HBM including perceived benefits, barriers and self-efficacy. However there is much complexity in the relationship between beliefs and preventive health behaviours of second-hand clothing sellers related to a range of specific work activities and various occupational hazards which are presented in Figure 58.

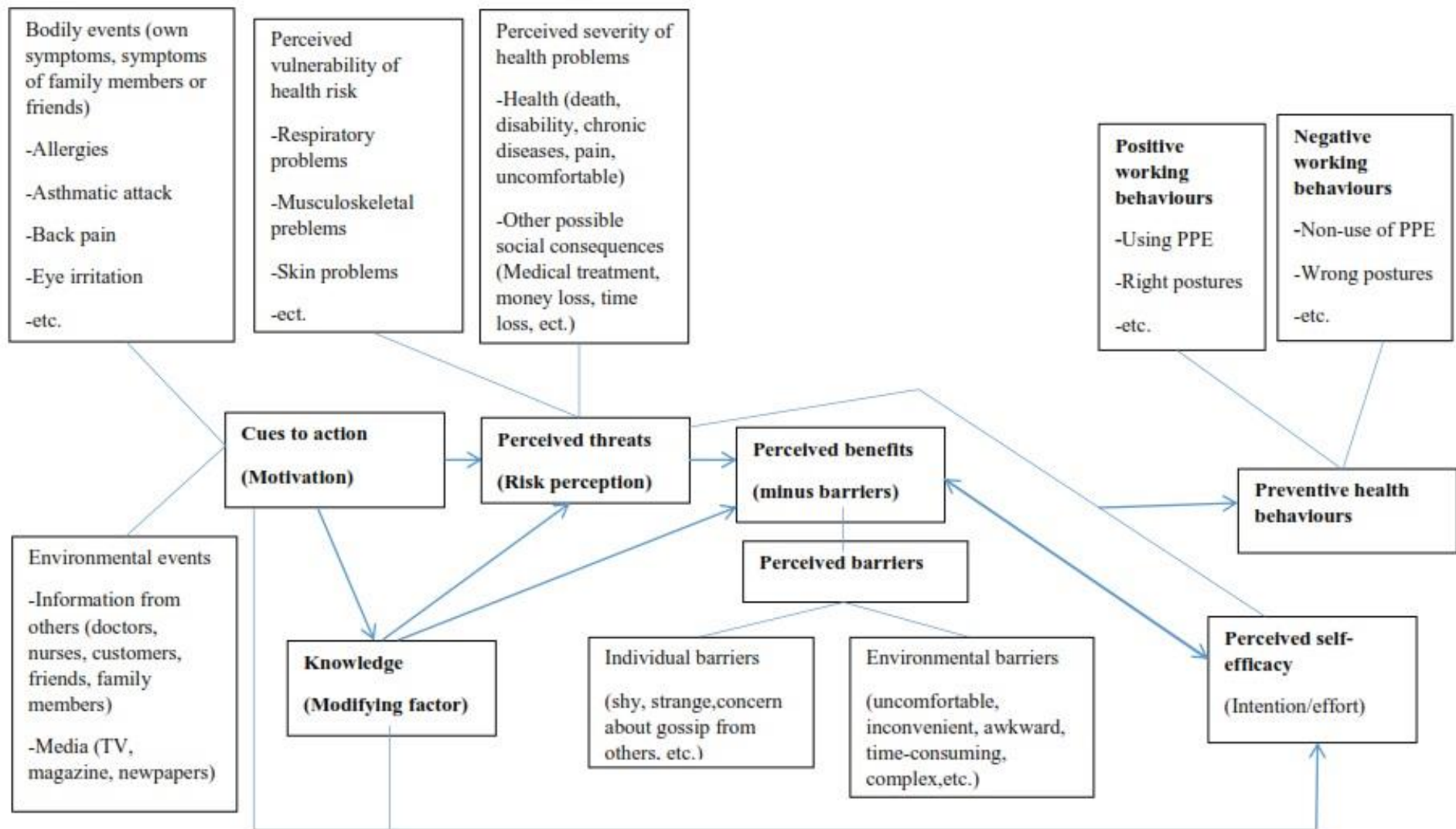


Figure 58 Applicability of HBM to explain relationship between beliefs and behaviours of second-hand clothing sellers

As presented in chapter 4, 'beliefs about occupational health risk and risk prevention', the findings show that personal experience and information – through internal and external cues to action – may increase individual knowledge and, in turn, knowledge as one of the modifying factors in HBM influences individual perceptions consisting of perceived threats, perceived benefits/barriers and perceived self-efficacy. Consequently internal and external cues to action are important factors influencing the other components of HBM, especially perceived threats or risk perception, while risk perception influences the perception of the benefits of taking action, i.e., the potential benefits in reducing susceptibility and/or severity from work-related health problems will not be considered if the second-hand clothing seller does not have perceive the risk. In turn, when the perceived benefit outweighs the barrier to taking action it influences the self-efficacy of second-hand clothing sellers. These findings reflect other health promotion literature but reveal specific features that are relevant to the second-hand clothing market that need to be understood in context when devising health promotion strategies.

On the subject of threat perception, the relevant literature indicates that the most normally associated source for producing perception of threat is that of anticipated harm (Carpenter, 2005). Also, threat perception has been explained as a negative psychological feeling or emotion that results from related harm that has not yet occurred, but is probable, possible or inevitable (Lazarus, 1966; Lazarus & Folkman, 1984). Many findings indicate that perceived threat or risk perception is a major concept of the HBM construct that has great relevance in health-related behaviours (Allahverdipour & Emami, 2008; Champion & Skinner, 2008; Glanz et al., 2008; Rosenstock et al., 1988; Rundmo & Iversen, 2004). Rundmo and Iversen (2004), for example, who studied risk perception and the driving behaviour of adolescents, stated that a perceived health threat could be hypothesised to influence personal risk behaviours. Some literatures also support the current findings as risk perception plays an important role in changing individual behaviours as it is the main component influencing perceived benefits (Champion et al., 2004), and self-efficacy (Glanz et al., 2008; Manfredi et al., 1977).

Even though several studies indicate that self-efficacy has the strongest correlation with personal protective behaviours, perceived threat is an important component of behaviour change and also influences self-efficacy (Manfredi et al., 1977). As Manfredi et al. (1977) stated, even though their findings reveal that self-efficacy is the strongest correlation of the ability to perform preventive health behaviour, the independent effect of “fear” as reflected in the structure of perceived threat and feeling of individual susceptibility were also apparent. The result shows that feelings of “fear” or “dread”, as reflected in the structure of threat or risk perception (Janis, 1967; Maloney et al., 2011; Slovic & Peters, 2006), were the essential determiner of public acceptance and perception of risk for a wide range of threats or hazards (Slovic & Peters, 2006). However, fear will appear at the highest level of threat – e.g., “you are vulnerable to the severe disease lung cancer because you smoke cigarettes” (Witte, 1992). Theoretically, if people felt that they were vulnerable to an illness or disease, but also believed that the disease could be controlled, the emotional response of fear would decrease. On the other hand, if individuals believed they were at risk for illness and nothing could be done, fear would be increased (Champion et al., 2004). Consequently, it can be concluded that “fear” is produced from perceived threat. Also, when a second-hand clothing seller has the high emotional response of fear due to high risk perception and high confidence or intention to perform positive work behaviours, behaviour change of that individual will occur. These findings were supported by Glanz et al. (2008): if individuals believe that illness poses a real and present threat to their health (higher fear) but feel confident (higher efficacy) that the use of personal protective equipment is effective and feasible, they are more likely to adopt positive health behaviour.

With regard to perceived benefits and barriers, the results show that a second-hand clothing seller having a high perception of benefits rather than barriers tends to perform positive work behaviour due to sufficient motivation and intention. Consequently, in order to perform positive work behaviour, perceived benefits need to be greater than perceived barriers. Consistent with the findings of Agurto et al. (2004), combined levels of benefits minus barriers indicate a possibility of threat reduction. If the perceived benefits outweigh the perceived barriers, the individual tends to adopt preventive health behaviour. One possible explanation is that perceived benefits and barriers seem to have the main effect on an individual’s intention to perform positive

behaviour. For example, individuals who believe they would have benefits by eating healthy food are willing to eat healthy food while individuals who have a low level of barriers to eat healthy food would eat healthy food. The positive value of the perceived benefits must exceed the perceived barriers or cost of, and/or resistance to, taking action (Kim et al., 2012).

Apart from perceived benefits and barriers, perceived self-efficacy is considered a very important component of HBM to encourage positive behaviour of second-hand clothing sellers. A growing body of literature supports and helps to understand why self-efficacy is very important. Gosselin and Maddux (2003) said that beliefs in self-efficacy are the most important determinants of the behaviours people choose to engage in and how much they persevere in their efforts in the face of challenges and difficulty. It influences the adoption of healthy behaviours, the cessation of unhealthy behaviours, and the maintenance of behavioural changes in the face of challenge and difficulty. Kakudate et al. (2010) also supported the idea that self-efficacy is important for behaviour change. They stated that it is assumed that the prognosis for individual health behaviour can be improved by assessing the proficiency of perceived self-efficacy through providing information/health education adapted for individual patients, and promoting behavioural change for self-care. Thus, accurate assessment of self-efficacy is an important key in daily preventive care.

Finally, as Glanz et al. (2008) concluded, “for behaviour change to succeed, people must feel threatened by their current behavioural patterns (perceived threats; perceived susceptibility and severity) and believe that change of a specific kind will result in a valued outcome at an acceptable cost (perceived benefit). People also must feel themselves competent (perceived self-efficacy) to overcome perceived barriers to take action”. For these reasons, enhancing individual beliefs regarding work-related health problems and risk prevention is necessary for a health promotion strategy to promote positive work behaviour of second-hand clothing sellers.

5.4 Summary

In this chapter I have illustrated the details of preventive health behaviours, or their lack, among second-hand clothing sellers to prevent occupational health problems trying to point to the details that arise from specific work processes and the particular occupational threats to health in their context. And also, the influence of risk perception, perceived benefits, perceived barriers and perceived self-efficacy toward preventive health behaviours has been presented. The results indicate that in order to change behaviour; perceived benefits must be higher than perceived barriers (i.e., perception of benefits need to be more powerful than perception of barriers for changing behaviour). Nevertheless, convincing people about the benefits of risk prevention is difficult as people need to have sufficient cues to action and perception of risk before perceiving benefits. Because of the lack of cues to action through experience of illness as well as information (including that from the mass media), most informants in this study had inadequate risk perception of work-related health problems. Consequently, in order to convince people to have powerful perceptions of risk and the benefits, including the confidence to take action; the implications and future directions for a health promotion strategy to increase relevant factors influencing positive work behaviour is considered, consisting of the strategy for enhancing knowledge, beliefs and self-efficacy of second-hand clothing sellers presented in the next chapter.

Chapter 6: The implications of health promotion strategies for second-hand clothing sellers

6.1 Introduction

Because there are currently no tailored interventions directed towards second-hand clothing sellers, health promotion strategies specifically for second-hand clothing sellers are required to promote health for the workers who are exposed to occupational risk, if health promotion is to be meaningful. In this chapter I describe the future direction recommended as a result of this study for health promotion strategies for second-hand clothing sellers. The information presented was drawn from research findings combined with the relevant literature. As the current findings illustrate, high perception of all health belief model (HBM) components except perceived barriers which must be lower than perceived benefits, influence the positive work behaviour of second-hand clothing sellers. In order to make use of the findings for the future direction recommended as implications for health promotion strategy, promoting knowledge, health beliefs including self-efficacy are required as they are the main key points for the future plan, as well as further study regarding the implications of health promotion strategies for second-hand clothing sellers. Also, these recommendations could be applied to promote health for other occupations which have similar working conditions and environment to those who work as second-hand clothing sellers.

6.2 The implication for health promotion strategy for second-hand clothing sellers

As identified in chapter 5, the present study revealed that cues to action is the most important component of HBM influencing positive work behaviours in this particular setting, while perceived barriers influence directly the negative work behaviours of second-hand clothing sellers. Also, risk perception provides the force or energy to act and the perceived benefits (minus barriers) provide a constructive path of action. The relationship between the six key concepts of HBM and positive work behaviours is presented in figure 59.

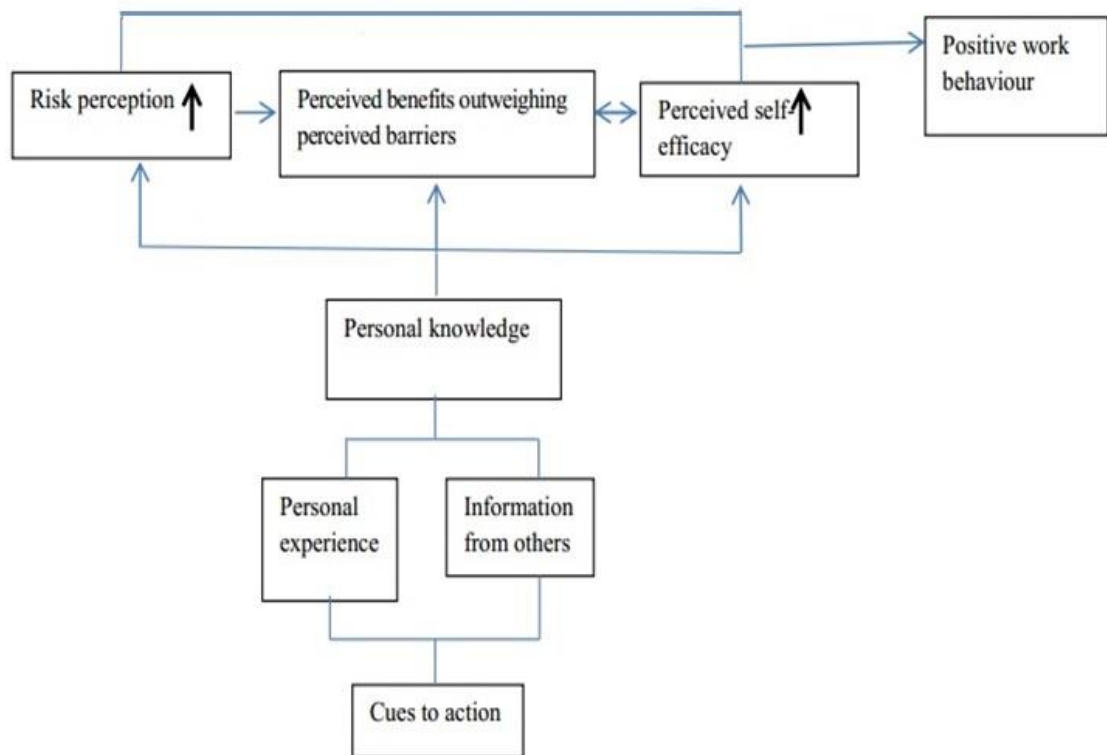


Figure 59 The relationship between the concepts of HBM and positive work behaviours of second-hand clothing sellers

According to figure 59, as described in the previous chapter, the present findings illustrate that cues to action, from personal experience and information from others, is the most important component of HBM which produces information and knowledge influencing the other components of HBM, namely: risk perception, perceived benefits/barriers and self-efficacy. Strategies that may encourage positive work behaviour of second-hand clothing sellers involve increasing cues to action, risk perception, perceived benefit and self-efficacy of taking action. Equally, reducing perception of barriers is needed. The structure of a potential health promotion strategy is presented as figure 60.

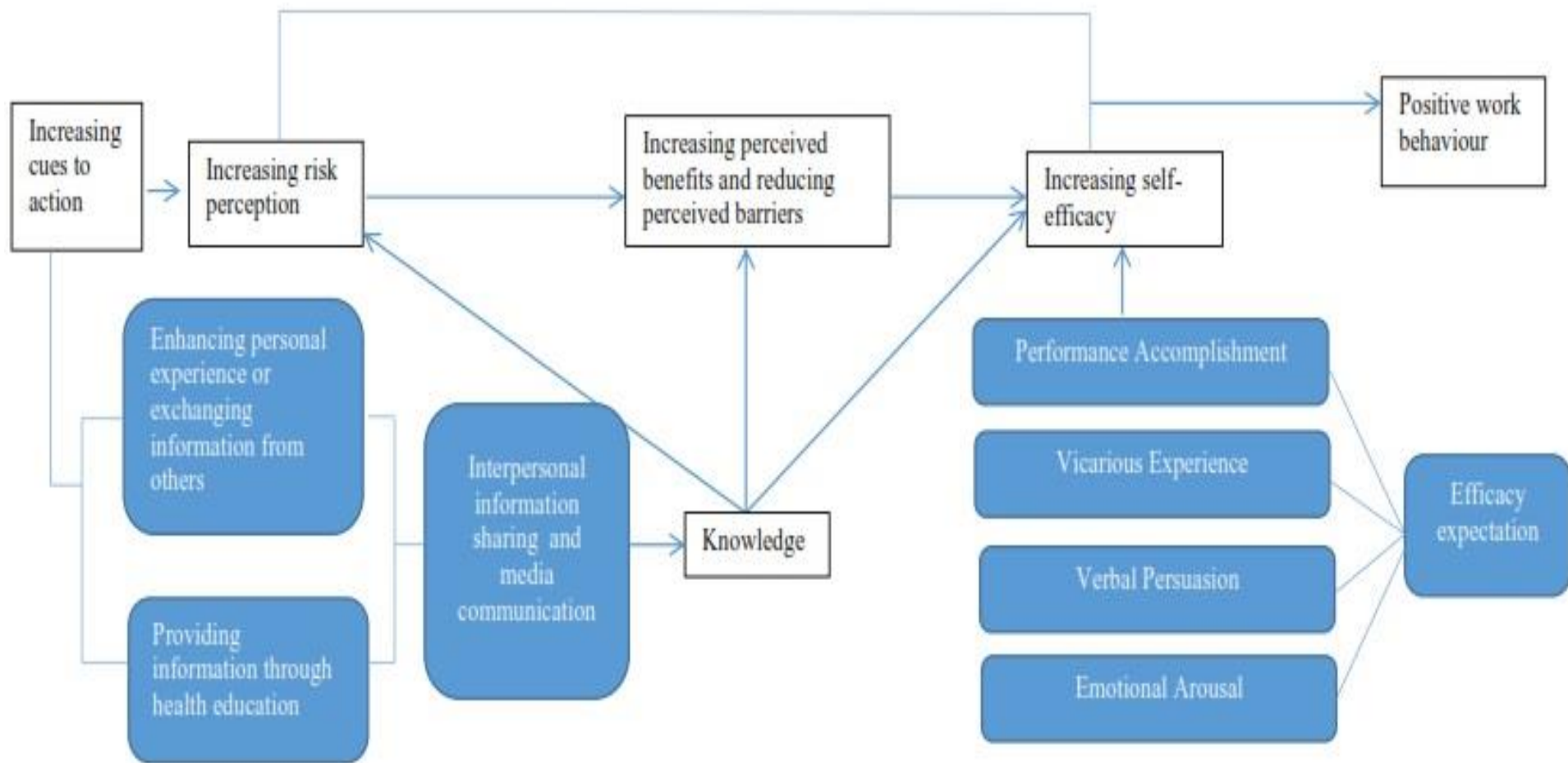


Figure 60 Promoting knowledge and health beliefs in the market place

The structure of the figure 60 is focused on the relationship between the six key concepts of HBM and positive work behaviour. The relevant literature and my findings as reported in Chapters 4 and 5 shows that cues to action is a strategy, by itself, able to activate readiness to change individual behaviour (Austin et al., 2002). The cues to action in this study that emerged from the ethnographic work can be characterised as internal cues (for example, personal symptoms) and external cues (for example, doctor's suggestions). To increase cues to action, receiving information from others or through the mass media, a health information seeking strategy is necessary (Chew et al., 2002; Chou & Wister, 2005; Ramirez et al., 2002). Consistent with Holcomb et al. (2009), people acquire knowledge through three major methods: individual direct experience; information from others such as observing the actions of others; and explicit codified sources such as books.

The study findings, as presented in chapter 5, revealed that "Knowledge" as a modifying factor is one of the major key points directly influencing risk perception, perceived benefit, barriers and self-efficacy of second-hand clothing sellers. Consistent with HBM theory, knowledge as a modifying factor may influence the major key-concepts of HBM: susceptibility, severity, benefits, barriers and self-efficacy (Glanz et al., 2008; Janz & Becker, 1984; Rosenstock, 1994). However, several studies have already indicated that although knowledge is important and necessary, knowledge alone is not sufficient for changes in individuals' behaviours (Bandura, 1986; Israel et al., 2010; Kollmuss & Agyeman, 2002; Rosenstock et al., 1988; Soskolne et al., 2007; Worsley, 2002). Many studies applying HBM theory for enhancing positive behaviours concluded that along with increasing knowledge, enhancing beliefs including self-efficacy are needed to promote improving or maintaining positive behaviours for disease prevention (Abood et al., 2003; Chew et al., 2002; Dini Talatappeh et al., 2012; Lee et al., 2008; Sedlak et al., 2000; Slonim et al., 2005).

The findings of Chew et al. (2002) show that enhancing beliefs such as perceived self-efficacy to promote health for participants have led them to perform healthy behaviour. Chew et al. (2002) also explained that receiving health information by viewing a television programme series can induce the application of HBM in

promoting preventive health behaviour. This suggests that increasing individual health beliefs through programme viewing could help participants to boost external cues (information through media) by providing a clear picture of the benefits resulting from, and barriers to, preventing health behaviour. This variable, as well as its counterpart cues to action, combined with health knowledge to form higher self-efficacy. Also, the programme can enhance the health knowledge of the participants, which in turn, raises their risk perception (Chew et al., 2002). Similarly, Lee et al. (2008) in a study on individual beliefs about cervical cancer screening reported that enhancing knowledge may influence participants' beliefs and, in turn, the beliefs affect their health-related behaviours. They also concluded that knowledge may be interwoven into or influence individual beliefs about risk prevention which may create unique cultural beliefs about health prevention. These beliefs could in turn affect health-related behaviour. For this reason, promoting knowledge and beliefs are considered as components relevant to positive work behaviours of second-hand clothing sellers. Also, according to chapter 7, local cultural and social context influences the risk perception of a community's members (de França Doria, 2010) as well as the health service system ((Prüss-Üstün et al., 2005). Consistent with the study of Taylor et al. (2006), to promote health a number of social, environmental and economic factors are included. Thus, the following sections present two areas of action to promote positive work behaviours of second-hand clothing sellers consisting of increasing knowledge, and enhancing belief including self-efficacy regarding occupational health risk and preventive health behaviours.

6.2.1 Enhancing workers' knowledge

As described elsewhere in this thesis, knowledge directly influences risk perception, perceived benefits, barriers and self-efficacy related to the preventive health behaviours of second-hand clothing sellers. Consistent with the study of Champion and Skinner (2008) and Glanz et al. (2008), knowledge is one of the modifying factors that may influence individual beliefs, (i.e., perceived susceptibility, severity, benefits, barriers and self-efficacy). Li et al. (2016), who adopted HBM and conducted a qualitative study to understand health-risking sexual behaviour, revealed that how men interpreted their knowledge that HIV infection could be controlled by using medicine induced their motivation to perform safe sex behaviour. If the knowledge was interpreted as: "It is not a big deal to get HIV because it can be controlled," the motivation for disease prevention was decreased. By contrast, if the knowledge was interpreted as: "It is still difficult to live with HIV because it has not been cured," there was more motivation for safe sex behaviour.

Even though the relevant studies indicated that knowledge alone is not enough to affect behaviour change (Kollmuss & Agyeman, 2002; Nutbeam & Blakey, 1990; Soskolne et al., 2007; Worsley, 2002), it is unlikely that people will continue engaging in positive health behaviours if they do not possess a sufficient knowledge base (Chew et al., 2002; Rimal, 2000, 2001). Consequently, enhancing knowledge of the workers remains necessary for a health promotion strategy to promote positive work behaviour for second-hand clothing sellers but, as well rehearsed, knowledge alone is not sufficient. Consistent with the study of Rimal (2001), enhancing knowledge is an indicator of health improvement. At least, individuals can keep health knowledge in abeyance for a while when they decide whether to make the requisite behavioural changes.

As described in chapter 5, knowledge can be provided through health education as well as individual experiences and information. It means that health education and information or personal experiences provide opportunities for second-hand clothing sellers to acquire knowledge regarding health risk and preventive health behaviours. Also, these factors can induce risk perception, perceived benefits and self-efficacy

which influence the preventive work behaviours of second-hand clothing sellers. Consistent with the study of Hajian et al. (2011), providing health education based on HBM that targets individuals at risk may affect their preventive health action. Also, Jones et al. (2014) concluded that effective health education through text messaging and social media can induce knowledge about risky sexual behaviour affecting the sexual risk behaviour of participants of the study.

Additionally, several studies indicated that knowledge provided through health education, information or individual experiences is referred to as one of the most important characteristics of health promotion (Cadilhac et al., 2015; Ceber et al., 2010; Chen & Lin, 2010; Ghaffari et al., 2012; Hajian et al., 2011; Hashemian et al., 2015; Malak & Toama, 2015; Secginli & Nahcivan, 2011). Ghaffari et al. (2012), for example, who studied the effect of HBM-based intervention on promoting nutritional behaviours, indicated that there are several basic educational needs which increase the knowledge of participants and also change their intention for promoting preventive health behaviours. They also revealed that increasing awareness of the participants of the need for disease prevention through tailored educational campaigns, to increase their knowledge, is likely to improve their intention toward positive health behaviour. Consistent with the views expressed by Malak and Toama (2015), informants who engaged in an educational programme based on HBM to prevent osteoporosis demonstrated higher levels of knowledge and health belief about the health risk and preventive behaviour of osteoporosis than those who did not engage. In addition to the previous examples, because HBM would increase the likelihood of taking preventive action of individuals, several studies conclude that a health education programme based on HBM is better than a general approach (Sharifirad et al., 2013; Solhi et al., 2010). Sharifirad et al. (2013) explained that a health education programme based on HBM for recommended weight gain in pregnancy had successful results compared with traditional education. Cao et al. (2014) supported the view that health education based on HBM is effective in promoting a range of behaviour changes in the target population.

Relevant studies indicate that in developing countries such as Thailand, implementing a comprehensive education programme remains a primary tool in the promotion of health and prevention of diseases as it is aimed at increasing personal knowledge as

well as public awareness to prevent diseases (Boonstra, 2015; Gupta et al., 2012; Nutbeam, 2000). Knowledge, in the form of health education as well as information or personal experiences, can be provided through interpersonal information sharing (Klischewski & Scholl, 2008; Yang & Maxwell, 2011) and media campaigns or media communication (Chang & Chuang, 2011; Koinig, 2016; Leonardi, 2014; Street et al., 2009; Twesigye et al., 2016; Walther et al., 2010). Some studies indicate that “tacit or implicit knowledge” can be shared via interpersonal means, whereas “explicit knowledge” (knowledge which has been articulated and written down) can be delivered through media or technology (Chang & Chuang, 2011; Panahi et al., 2012). Also, Klischewski and Scholl (2008), as well as Yang and Maxwell (2011), explained that interpersonal information sharing is not confined to explicit information and artefacts but also includes tacit knowledge. The details of providing health /education information through interpersonal information sharing and media communication are as follows.

6.2.1.1 Interpersonal information sharing

Interpersonal information sharing is based on a message or information being passed on to one or more people (Chivuno-Kuria, 2013). The exchange of information as well as forming a relationship leads to the benefit of both parties (Ha & Longnecker, 2010). It occurs when two or more people engage in voluntary, ongoing, interdependent interactions that involve meaningful interpretation of verbal and non-verbal messages (Galvin & Wilkinson, 2006). Interpersonal information sharing can occur within different contexts such as friends, neighbours, classmates, or members of a community (Jarvenpaa & Staples, 2000; Yang & Maxwell, 2011). According to Rioux (2005), when individuals obtain new information, they then make connections and share information with others such as their acquaintances, often using fairly simple technologies such face-to-face conversations or through social media. The recipients will store information needs in their potential memory through daily interactions with other people. Many studies reveal that interpersonal communication is fundamental to establishing and maintenance of formal and informal personal relationships (Ackerson & Viswanath, 2009; Derlega, 2013; Fox & Warber, 2013).

In relation to the present study, personal individualised education directly linked to clothes sellers’ concerns is likely to be more effective than mass media strategies.

According to the finding of the present study, there was a lack of mass media devices provided in the second-hand clothing markets. Also, due to the lack of competence in using media devices, such as computers, combined with lack of use of internet sources such as websites or social media, second-hand clothing sellers were unable to receive information through media and internet sources. Moreover, there was little information regarding health risk or health problems from second-hand clothes propagated to people. Almost all the information from health care providers available through use of media was about germs and suggested that customers buying second-hand clothes should wash the clothes in hot water before wearing them. Other information included the risk of allergies from clothing dust and suggested that customers should wear a mask while purchasing second-hand clothes. Notably, there was no information given about health risk or health promotion suggestions for second-hand clothing sellers. It could be concluded that access to media devices is limited for the sellers. Consistent with the study of Ean (2010), communication through media such as online communication is difficult to access in some workplaces or organisations (Ean, 2010). What might be available through these means is also limited to using printed media to provide information in the marketplace which is described in section 6.2.1.2; mass media communication.

For these reasons, providing information through mass media in the workplace seems to be difficult for health care workers. Therefore, interpersonal communication, especially face-to-face communication, is the main source of information and knowledge of the sellers. Equally, interpersonal communication may be more applicable to second-hand clothing sellers than other forms of communication. As several studies indicated, computer mediated communication is yet to supersede face-to-face communication (Begley, 2004; Ean, 2010; Van der Meijden & Veenman, 2005). There is disagreement among researchers about whether information technology (IT) such as e-mail can facilitate tacit knowledge sharing. Some researchers insist that using IT for tacit knowledge sharing among individuals is impossible to achieve (Flanagin, 2002; Griffith et al., 2003; Haldin-Herrgard, 2000; Panahi et al., 2012). This may be because technology is more likely to transfer explicit knowledge rather than tacit knowledge (Griffith et al., 2003). While others conclude that IT has a supporting role in tacit knowledge sharing even though it may not be as

rich as face-to-face communication (Harris & Lecturer, 2009; Hildrum, 2009; Murray & Peyrefitte, 2007).

Several studies indicated that the main advantage of interpersonal interaction, especially face-to-face conversation, is the two-way nature of the communication. The relevant studies tended to support the concept of two-way transfer of information as it can be both fluid and interactive with the contribution of both narrator and listener(s) (Chen et al., 2010; Chivuno-Kuria, 2013; Lin & Lu, 2011; Morton & Duck, 2001; Slade et al., 2015; Walther et al., 2010). Slade et al. (2015) illustrated that an effective interpersonal communication such as two-way communication between patient and health care provider is essential to meeting patient needs; i.e., it enables a doctor to recognise his patient's agenda, and afterwards, frame the consultation in a way that was sensitive to the patient's need. The reason for this is that patients are enabled to freely express their concerns and articulate their reasons for seeking the treatment. Also, face-to-face communication is an effective channel to communicate in workplaces as it typically uses verbal communication, enhanced by facial cues to convey information as well as relay immediate feedback to other parties (Ean, 2010; Song, 2009). Consistent with the study of Morton and Duck (2001), interpersonal communication was strongly correlated with perceptions of personal risk. Also, the study findings of Tyler (1980) illustrated that beliefs about personal risk are thought to be informed through either interpersonal communication or direct experience. Thus interpersonal communication is one of the crucial strategies for providing health education and linked to perception of personal risk of second-hand clothing sellers.

According to the work context of second-hand clothing sellers, they generally work in the second-hand clothing markets at least three days per week and stay at home if they do not sell the clothes in the markets, for doing work at home such as separating clothes and putting clothes on hangers or for relaxing. Although it would be possible to receive health education or information from others, either at home, in the workplace (second-hand clothing markets) or at both, considering the current situation and context of second-hand clothing sellers, providing information about health risk and risk prevention in the workplace is more appropriate than providing information at home or in the health services. This is because providing information in the workplace could be more credible information if the information is provided or exchanged from

other sellers who are more experienced. Also, health professionals could become more familiar with the local context of second-hand clothing sellers including their work environment to provide tailored information under the context of clients.

Several studies indicated that providing health promotion services at the workplace enable service providers to understand the context of that workplace and its environment (Meershoek & Horstman, 2016; Peltomäki et al., 2003; van den Eertwegh et al., 2013). The findings of Peltomäki et al. (2003) supported that social contexts and environment are essential for health promotion in the workplace as it may address the lifestyles of the workers, workplace hazards, professional competence of employees, work organization, and/or early detection of diseases. Meershoek and Horstman (2016) studied workplace health promotion, and stated that the workplace is an ideal setting for work-related health promotion activities not only because workers spend much of their time there, but also because they benefit from having a healthy workplace and protecting themselves from work-related diseases.

Regarding strategies of interpersonal communication in the workplace, several studies indicated that a “socio-cultural approach”, presenting health information messages in the context of the social and/or cultural characteristics of the target population, is fundamental to enhance health communication effectiveness (Kreuter et al., 2003; Kreuter & McClure, 2004; Peltokorpi, 2006). Mokibelo and Seru (2016) indicated that language, as part of the sociocultural context, plays an important role in gaining knowledge from health communication. This suggests that for people using *specific regional dialects* to meaningfully and intelligently generate knowledge about disease prevention, campaign messages have to be written and verbally communicated in their specific local languages because people’s perceptions, attitudes and knowledge about disease messages are directly influenced by their cultural traditions and orientations, and can only be observed through their communicative actions (Mokibelo & Seru, 2016).

The location of the present study, Yala province, one of the three southern border provinces of Thailand, is a city with a mixture of people from different religions and cultures. There are now two main cultures in the city depending on religion, Muslim and Buddhist. Because Yala province borders Kedah and Perak of Malaysia, most of

the population (more than 70%) of people are Muslims and most of these speak Malay as their first language. The remaining citizens are predominantly Thai and Thai-Chinese Buddhists who speak Thai. Consequently, most second-hand clothing sellers in these areas are Muslim because they live in the three southern border provinces of Thailand known as Yala, Pattani and Narathiwat province. The culture of Muslims and Buddhists in the city is different, not only in the language spoken in daily life, but also their beliefs as well as religious and cultural activities.

Consequently, in order to provide health information in the most appropriate language, health professionals need to understand the target population and their language. For example, if all the participants are Muslims who speak Malay as their first language, providing information in the Malay language is best. However, if the health professionals are unable to speak Malay, the official Thai language is also useful as all groups will accept and understand this. Moreover, there are a lot of dialects, containing words used in the southern part of Thailand, which local people normally use in their routine of daily life even when speaking in the official language. Consequently, it would be better if health professionals understand the dialect of the local people, as this not only increases the ability to understand their conversation, but also to establish the relationship or build rapport between the health professional and clients (Dorgan et al., 2009). Consistent with the study of Arvey and Fernandez (2012), to achieve the effectiveness of a community health programme for workers, being able to speak the dialect or use the same language with participants is one of the important factors which can help the researcher ensure the success of the programme.

In addition, apart from using appropriate language for communication as well as using the context of the workplace (Lewis, 2003; Lewis et al., 2007), considering the difference of workers, for example, communication with workers of different ages (McCann & Giles, 2002, 2006; McCann & Keaton, 2013), and culture (Reitmanova & Gustafson, 2008) is also necessary to provide an appropriate interpersonal communication to the workers from different backgrounds. Reitmanova and Gustafson (2008) supported the previous statement that one of important barriers to providing health information to immigrant Muslim women was lack of linguistically and culturally appropriate information. Thus information designed to meet the needs of

clients with different backgrounds should consider religious and cultural practice (Reitmanova & Gustafson, 2008).

Considering an appropriate time to provide information for the sellers was also important. Because the peak business time in the markets is between 10am and 1pm, providing information in the morning, between 9 and 10am, is most appropriate because the sellers are not too busy. Although after 1pm is not the peak time, many sellers who are Muslims, have to prepare themselves for prayer; the “Zuhr” time begins after the sun’s zenith for the day, after 1pm and sellers need to have a break after the peak time before clearing their stalls around 2 and 3pm. Finally, interpersonal trust is important for sharing knowledge through interpersonal communication because it is a central characteristic of the relationship between people that promotes knowledge creation and sharing in networks or organisations (Abrams et al., 2003; Chen & Hung, 2010; Hsu et al., 2007). Chen and Hung (2010) concluded that interpersonal trust is the significant contextual factor that drives knowledge sharing. It positively influences individuals’ knowledge contributing and knowledge collecting behaviours.

To sum up, providing information and knowledge through interpersonal communication is accepted as one of the most effective methods of knowledge sharing because this method involves two-way communication between provider and recipient (Chen et al., 2010; Chivuno-Kuria, 2013; Lin & Lu, 2011; Morton & Duck, 2001; Slade et al., 2015; Walther et al., 2010). Also, information and knowledge provided through interpersonal communication, especially by face-to-face communication, may be more applicable to second-hand clothing sellers than other forms of communication according to the context of the workers and their workplace. Additionally the findings suggest that information giving may be more useful where the information giver understands and has experience of the second-hand clothing sellers’ context and is credibly seen as having embraced behaviour change themselves. Therefore, it is valuable if clothing sellers themselves can help others in understanding the risks and in finding strategies to minimise specific risks linked to the work that take place in the market.

6.2.1.2 Mass media communication

Mass media are the various channels that carry mass communication transmitted through a medium (channel) that simultaneously reaches a general public (Wimmer & Dominick, 2013). The various forms of media through which this communication takes place include new digital media, such as PC and Internet, and old media, such as television, VCR (video cassette recorder), radio, print, and other electronic and audio-visual media (Adoni & Nossek, 2001; Verhoef et al., 2015).

According to the present study, however, there are limitations to this approach that are well documented in the literature. What seems to be crucial is the way in which these mass media approaches are used; many research studies have indicated that media have an important role in the shaping of individuals' risk perception or issue awareness (Combs & Slovic, 1979; Flay & Burton, 1990; Kasperson & Kasperson, 1996; Morton & Duck, 2001; Wahlberg & Sjoberg, 2000) as a starting point. For health care providers, mass media is useful when it has been applied as a vehicle for public service information aimed at the beliefs and attitudes as a precursor on which these behaviours are based (Morton & Duck, 2001).

As the results of relevant research studies indicate, there are a variety of mass media tools used for providing health education which could increase risk perception and influence the preventive health behaviour of individuals. For example, mass media messages concerning HIV/AIDS and condom use were significantly associated with a higher level of risk perception, self-efficacy and other behavioural predictors (Agha, 2003). In addition, Michael & Chevront (1998) stated that the World Wide Web as well as other internet-based resources could be applied to promote healthier behaviours because these resources enable health professionals to disseminate persuasive health communications to clients at relatively low cost. According to the current findings, although mass media is also useful to induce risk perception of some informants, for example, a 45-year-old female informant of 20 years' experience perceived that she may have an allergy to dust mite from clothes through reading magazines, as well as a 42-year-old male informant of 16 years' experience who perceived after watching a TV programme that he is susceptible to lung disease from dust exposure, mass media influence in the market was not strong due to limitations of media provided in the market. Also, personal communication from someone who has

credibility and is also experienced in clothes selling, may be more helpful than mass media alone.

These findings are supported by the study of Nguyen et al. (2016); mass media communication may not be sufficiently interactive to change the cultural habits of participants. By contrast, interpersonal communication sharing using face-to-face communication in which health personnel, who are supportive and knowledgeable, communicate directly with clients in order to provide tailored information and respond to the clients' needs, was more effective. This interpersonal counselling tended to positively affect the clients' decision to perform healthy behaviour. They also mentioned that, from the results of their interventions, providing health information through both interpersonal counselling and mass media seems to be more effective than providing either of these methods on their own. Consistent with the study of Sanghvi et al. (2013), mass media campaign alone is not effective enough to affect behaviour change of individuals except when it combines with interpersonal counselling. Consequently, the effectiveness of combined communication strategies seems to be more effective than using mass media alone.

For using mass communication to enhance knowledge and promote positive work behaviour as part of the health promotion strategy for the workers, following the recommendation of Hubley (1986) and Laferrière et al. (2013), a suitable technology should be compatible with the community's culture, and technically feasible using locally obtainable materials and skills. Consequently, the community's context or the culture of second-hand clothing sellers is considered for appropriate health promotion planning. Regarding the context and including the routine of the working day of second-hand clothing sellers, there were limited opportunities to access the mass media because most of them sold merchandise in temporary tents/stalls which did not have mass media facilities, such as TV, computer, internet etc. Also, they have only 4-6 hours for all process in the market and so were very busy almost all of the time.

After considering the context of individuals and their workplace, to provide an appropriate technology-mediated communication for second-hand clothing sellers at their workplace in second-hand clothing markets, print media is considered best suited to provide information to the sellers. This is because print media, for example,

pamphlets, booklets, manual, etc., are portable and easier to access both in the markets and at home. It is also useful for the sellers, because most of them could not access the internet and gain access to information from other mass media facilities. According to the interviews, all participants could read, even though some of them had limited literacy skills. Consequently, it is possible to design suitable print media that they can understand to convey health risks as well as the ways to minimise occupational health threats. However, some literature illustrated that the internet could be used in conjunction with other interpersonal and mass media channels to promote programme effectiveness and expand the reach of public health programmes (Michael & Chevront, 1998). With the second-hand clothing market, because there were limited places to access the internet in this area, providing health education through the internet seems to be difficult and does not seem to work for second-hand clothing sellers.

This method of knowledge sharing is supported to some extent by the results of the present study which reveal that magazines and newspapers as printed media influence risk perception about dust exposure and car accidents of some informants. These media provided information including the benefits of preventive health behaviour and linked to risk prevention such as wearing a mask to guard against dust or the need to fasten their seat belt while driving. However, the details of these printed media were not aimed particularly at second-hand clothes working conditions as the magazine featured a dust mite causing allergies while the newspapers focused on fatal car accidents.

Following the research findings of Davidson and Freudenburg (1996), the only significant predictors of media content regarding risk concerns were the number of casualties and the level of damage. Print media provided to second-hand clothing sellers needs to inform them of the severity of health risks they are exposed to, particularly the high impact of the adverse work-related health problems which could cause death, disability or other severe symptoms. For example, manual handling of heavy loads is understood to be a predisposing factor to musculoskeletal disease especially low back pain, along with exposure to incorrect postures, vibrations and heavy workloads. Also, the studies illustrated a relationship between degenerative disc disease, such as disc herniation, and work-related physical factors, particularly lifting

heavy loads. Even though the issue starts initially as minor aches and pain, it can result in severe injuries that will be permanently disabling if not addressed. (Mariconda et al., 2007; Seidler et al., 2009; Suri et al., 2010; Videman et al., 2007; Williams & Sambrook, 2011). Loading position was also investigated (Callaghan & McGill, 2011; O'Connell et al., 2011), while Suthar (2011) indicated that these musculoskeletal issues start initially as minor aches and pain, but left unaddressed can result in severe injuries that will be permanently disabling.

In addition to both interpersonal and media communication, perceived self-efficacy is significant and plays an important role in enhancing workers' ability to share their knowledge (Chen & Hung, 2010; Kwahk & Park, 2016; Lin & Huang, 2008). When individuals exhibit a high self-efficacy and strong cognitive belief in the use of knowledge, their efforts to share knowledge with others are also heightened (Kwahk & Park, 2016). As indicated by Bandura (1997, 2001) in his seminal work, enhancing the sense of individual self-efficacy is necessary to transform knowledge including skills into successful courses of action. Consistent with the study of Rimal (2000), health knowledge is translated into individual healthy habits through his or her perceived self-efficacy as the mediation. Following the previous suggestions, enhancing self-efficacy to share information and knowledge for second-hand clothing sellers is necessary as it is related to the ability of knowledge and information sharing.

The relative significance of interpersonal and media sources of information at the beginning of the adoption process may vary for different activities and for the same activity at different stages in the adoption process (Bandura, 2001; Pelz, 1983). Finally, a combination between interpersonal and mass media communication was more effective than applying either alone (Morton & Duck, 2001). Bandura (2001) illustrated modelling the influences function through a two-step diffusion process. Influential individuals pick up new ideas from media, such as TV, and pass them on to their followers or others through personal influence. Finally, as described earlier, the relevant studies indicated that knowledge alone is not sufficient for changes in individuals' behaviours (Bandura, 1986; Israel et al., 2010; Kollmuss & Agyeman, 2002; Rosenstock et al., 1988; Soskolne et al., 2007; Worsley, 2002). Many studies applying HBM theory for enhancing positive behaviours concluded that along with increasing knowledge, enhancing beliefs including self-efficacy are needed to promote

improving or maintaining positive behaviours for disease prevention (Abood et al., 2003; Chew et al., 2002; Cody & Lee, 1990; Dini Talatappeh et al., 2012; Lee et al., 2008; Sedlak et al., 2000; Slonim et al., 2005). Thus, the next section illustrates the strategy to enhance beliefs regarding occupational health risk and preventive health behaviours.

6.2.2 Enhancing beliefs regarding occupational health risk and preventive health behaviours

Although the components of health beliefs were complex and might not have been anticipated, not fully apparent in the findings from the market context, and not much behaviour change was reported, as presented in chapter 5, these components of HBM, especially internal and external cues, may have an important role to enhance health beliefs. This is consistent with the literature from other contexts of health promotion. For this reason, a strategy to enhance the health beliefs of second-hand clothing sellers is considered because, as mentioned earlier, enhancing beliefs including perceived self-efficacy are needed to promote, improve, or maintain positive behaviours for risk prevention (Abood et al., 2003; Chew et al., 2002; Cody & Lee, 1990; Dini Talatappeh et al., 2012; Lee et al., 2008; Sedlak et al., 2000; Slonim et al., 2005).

Furthermore, as Shahrabani and Benzion (2012) concluded, personal experience whether positive or negative, and health information gained from others, such as friends, family, health care practitioners including tailored media, can alter people's health beliefs and their preventive health behaviour. Also, some studies revealed that information or experience influences not only perception of risk, particularly via affect (threat) and emotion (fear), but also influences the other components of beliefs; that is, perception of benefits, barriers and intention (self-efficacy) of preventive behaviour (Betsch et al., 2010). Consistent with the findings of this present study, information from others as well as experience from symptoms are the component of cues to action in HBM that influence the beliefs of sellers. Media was also seen to play a role but this did seem limited to sellers who were very experienced and had long-standing work in the market. For this reason, increasing cues to action is perhaps one effective way to increase health beliefs by enhancing the way sellers receive information, directly

through personal or vicarious experience and also through interpersonal communication and targeted media.

Regarding a strategy to increase risk perception, Okun et al. (2016) provide important transferable knowledge, whereby they developed a framework of foundational workplace safety with embedded health knowledge and skills (the NIOSH 8 Core Competencies) based on HBM theory that stated that competencies of perceived susceptibility and perceived severity of risk designed to help workers to recognise that while work has its benefits, all workers can be affected by their jobs. They can be sick, injured or even be killed on the job. Workers need to understand how specific health risks from their workplace can affect their lives including their families. Also, they stated that workers need to identify health threats, evaluate the health risks and predict how they themselves could be sick or injured. This is also consistent with the work of Bandura (2004) and a study by Meyerowitz and Chaiken (1987); people need to be provided with specific information on how habits affect their health, by arousing fear of threats or by raising perceptions of one's personal susceptibility to health risks. Similarly Leventhal (1992), who developed a self-regulation model to explain how to understand an individual's illness and used the model as a framework to explain the impact of personal experience on beliefs and in turn on preventive health behaviour, indicated that people's understanding of health problems is based on their justification about its causes, timeline, consequences, prognosis, trajectory, and about the capability of themselves or others to successfully treat (cure or control) the health condition. These cognitions are complex and can be shaped and obtained from people's beliefs, their personal experience and information through media or importantly directly from others (Shahrabani & Benzion, 2012; Webster & Heeley, 2010).

While following the NIOSH 8 Core Competencies (Okun et al., 2016) and model of self-regulation (Leventhal, 1992) helps second-hand clothing sellers to understand the work-related health problems that could occur due to working conditions, the information or experience needs the depth and detail as discussed above. For example, in order to provide information about musculoskeletal issues for the sellers who use incorrect postures, health professionals need to provide information about the causes of work-related health problems; for example, herniated discs can be caused by

incorrect working postures and heavy lifting. Symptoms may include severe pain and numbness or weakness. The impact or severity of the illness can affect their lives including their families; for example, a herniated disc can cause low back pain and functional disability (Rasouli et al., 2013).

However, because second-hand clothing markets are unregulated workplaces, the relevance of the NIOSH 8 Core Competencies in relatively unregulated workplaces needs to be considered. Detailed observation indicated that second-hand clothing markets are poorly monitored and not subject to effective regulation or control. There are some limitations affecting health information provided; for instance, limitation of working time in the markets and lack of community participation. These will be an obstacle to inducing risk perception. For these reasons, it is challenging for health promotion strategies to enhance risk perception in the unregulated workplace such as second-hand clothing markets. Consistent with the study of Peltomäki et al. (2003), the informal sector working in small (even personal) unregistered or unregulated workplaces displayed the particular needs and difficulties for health promotion arrangements because of an obvious social priority for health promotion. Okun et al. (2016), however, argued that the NIOSH 8 Core Competencies can apply to all occupations and workplaces because they are not specific to any individual vocation, and are supportive of career technical and vocational training programmes. Also, the competencies are not meant to replace or preclude any subsequent workplace safety training and may serve as the basis for future job-specific safety and health training (Okun et al., 2016).

Apart from a strategy to increase risk perception, Pescud et al. (2015) indicated that information on potential benefits of health promotion regarding health and well-being in the workplace aligned with personal perceptions relating to the health status of the workers, both healthy and unhealthy, may be crucial to the contextualised information provided. Regarding strategy to increase perceived benefits, Okun et al. (2016) mentioned that the competency of perceived benefits refers to an ability to recognise that work-related health problems and injuries can be prevented and are predictable. For example, second-hand clothing sellers who are exposed to dust may have respiratory issues; however, if they use a mask while in contact with dust, they will be safer. Shahrabani and Benzion (2012) indicated that past experience regarding the

advantages of risk prevention will increase perception of benefits and decrease perception of barriers. They argued that individuals who have a “good” experience with risk prevention; for example, they did not have the flu after having a vaccination, will lead to perceived increased benefits from the prevention that they had experienced and at the same time lower their perceived barriers. Consistent with the present findings, participants having direct experiences regarding the advantages of preventive health behaviours explained they adopt positive behaviours as they have a high perception of the benefits. This means that if second-hand clothing sellers themselves are provided with the opportunity to have positive experiences with preventive health behaviours; for example, perceived advantages from using masks while separating clothes thereby avoiding a bad smell from clothes and spreading dust in the air, or wearing sunglasses while working under strong sunlight to prevent eye irritation, their perception of benefits may increase and their perception of barriers may decline.

In addition to reducing the perception of barriers, understanding of the specific problems related to risk prevention in workers such as the target population is necessary to address the perception of barriers and identify the appropriate strategy to overcome them so that individuals are more likely to perform the desired behaviours (Duffy et al., 2013; Straus et al., 2009; Tetroe et al., 2011). Implementation and design of appropriate education or information is necessary to decrease the perceived barriers of workers (Solhi et al., 2014). For example, the perceived barriers of working with the correct postures for second-hand clothing sellers include complexity, awkwardness and wasted time. Consequently, the information provided to the sellers must be appropriate and carefully explain the relevant details to induce the perception of barriers as mentioned earlier. For instance, to provide the appropriate information about the proper technique for lifting the clothing bales, the details about right postures should be simple to follow, easy to understand, and clearly and simply indicate the benefits of correct postures (i.e., reducing the complexity). Health providers could show why it is worth following them and how the sellers can prevent musculoskeletal issues arising (i.e., reducing the perceived waste of time), not only to reduce perceived barriers, but also to increase the perceived benefits of the action. As Williamson (2013) illustrated, focusing on barriers provides a productive way to conceptualise potential solutions; for instance, health information in the context of the needs of people and their limitations.

Finally, with respect to a strategy to increase the perceived self-efficacy of second-hand clothing sellers, the present findings reveal that perceived self-efficacy directly influences preventive health behaviours. If the sellers have the high emotional response of fear due to the high risk perception and high self-efficacy (the confidence or intention to perform positive work behaviours), behaviour change of the individual will be more likely to occur. This is because both risk perception and perceived self-efficacy are likely to motivate individuals to take action for doing something such as seeking and using health information (Rimal, 2001; Rimal & Real, 2003). Also, individuals with a high perception of risk and strong self-efficacy can be expected to engage in more preventive behaviours (Connolly, 2016; Rimal & Real, 2003). Self-efficacy, therefore, is one of the most important strategies to promote the health of the sellers.

The original version of HBM theory (Janz & Becker, 1984) and several studies, both more recent and historical, (Champion et al., 2005; Kadden & Litt, 2011; Manfredi et al., 1977) indicated that belief in self-efficacy is the strongest correlation of the ability to perform preventive health behaviour and that self-efficacy was not explicitly incorporated into the HBM theory (Rosenstock et al., 1988). Rosenstock et al. (1988) added self-efficacy to the original concepts of beliefs within the HBM, explaining that the concept of “outcome expectation” draws on Bandura’s self-efficacy (Bandura, 1977). This was defined as “the individual’s estimate that a given behaviour will lead to certain outcomes” and so is similar to the concept of perceived benefits in the HBM. However, the other concept of Bandura’s self-efficacy, “efficacy expectation”, is ignored. Rosenstock et al. (1988) also mentioned that the HBM has neglected efficacy expectation (as in the definition of Bandura) and therefore may have failed to account for as much variance in behaviour as it might have done. Thus, it is not difficult to understand why belief in self-efficacy was never incorporated explicitly into the HBM historically, even though more recent literature has turned its attention to these concerns (Donadiki et al., 2014; Downing-Matibag & Geisinger, 2009; Efstathiou et al., 2011).

For this reason, I have made a decision to directly adopt suggestions from Bandura (1977, 1986, 2004), who developed self-efficacy as part of the social learning theory,

as a key strategy to enhance self-efficacy in second-hand clothing sellers. This is not only because self-efficacy as developed by Bandura provides more explicit components of self-efficacy than the HBM theory, but also because several studies indicated that, if health promotion is to be effective, Bandura's self-efficacy as proposed to enhance self-efficacy perception be adopted as a strategy for enhancing beliefs in self-efficacy (Ashford et al., 2010; Hurley & Shea, 1992; Kadden & Litt, 2011; Liu, 2012). Ashford et al. (2010) explained that health promotion strategies applied from the four sources of self-efficacy identified by Bandura (1977) can enhance perceived self-efficacy for clients. These strategies help the clients in reducing their negative emotions such as stress and correcting misinterpretations of their bodily states. Similarly, Kadden and Litt (2011) supported that it has been posited that the four principal sources of perceived self-efficacy identified by Bandura could be expected to enhance either direct or indirect perceptions of self-efficacy. These benefit the development of effective health promotion strategies for enhancing people's perceived self-efficacy.

According to the concept of Bandura's self-efficacy, Bandura (1977, 1986) explained self-efficacy in terms of efficacy expectations and outcome expectations as mentioned earlier. Efficacy expectations refer to the belief that a person has that they can accomplish certain behaviour, while outcome expectations are concerned with the possible consequences that particular behaviours are likely to produce. In this section, I have made a decision to use only efficacy expectations because, as mentioned earlier, the outcome expectation overlaps with HBM. Bandura (2004) explained that for the most part, the outcome expectation in self-efficacy overlaps with HBM; i.e., the perceived susceptibility and severity to health problems outlined in the HBM are the expected negative outcome in Bandura's self-efficacy. While the perceived benefits in the HBM are the positive outcome in Bandura's self-efficacy. In addition, Bandura (2004) later used the term self-efficacy instead of efficacy expectation.

Bandura (1977, 1986) also identified the sources of self-efficacy, performance accomplishments, vicarious experience, verbal persuasion and emotional arousal. A crucial source to enhance motivation and performance attainments comes through the several links between self-efficacy and goal setting (Bandura, 1992; Bandura & Locke, 2003). In working with chronic illness, particularly those desiring long-term

change, the issues involved in life-long habits such as smoking, exercising, eating and drinking are obviously far more difficult to overcome. It requires a good deal of confidence that one can modify outcomes, such as lifestyles, before successful intervention is possible (Bandura, 1992). Similarly, with second-hand clothing sellers, changing behaviour to prevent occupational risk is difficult unless they have a good deal of confidence or intention to work with positive work behaviours.

Therefore, the outcome of strategic planning is to induce sellers' confidence for taking action and thus affecting their capability to prevent them from taking health risks. Figures 61 and 62 illustrate the structure of Bandura's self-efficacy theory (1977) and the various influence procedures normally applied to reduce defensive behaviour. They also illustrate the major source through which each approach operates to form expectations of mastery.

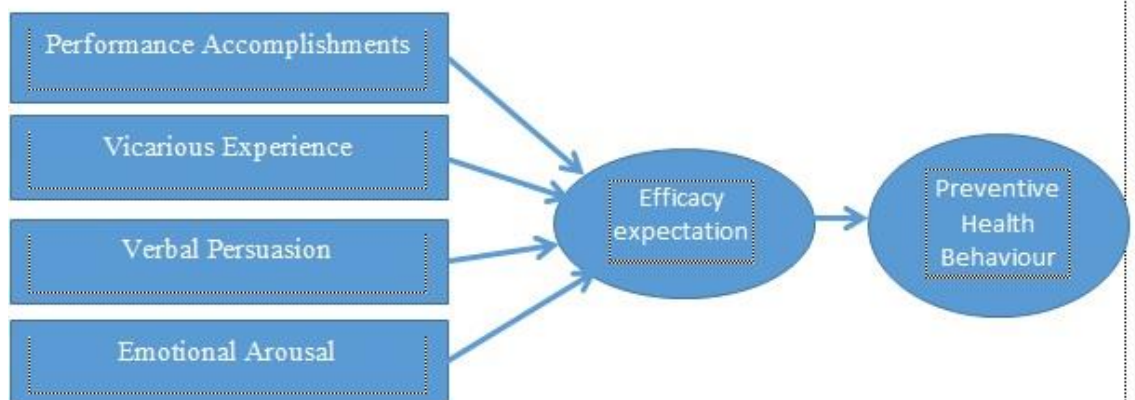


Figure 61 The structure of Bandura's Self-efficacy theory (1977)

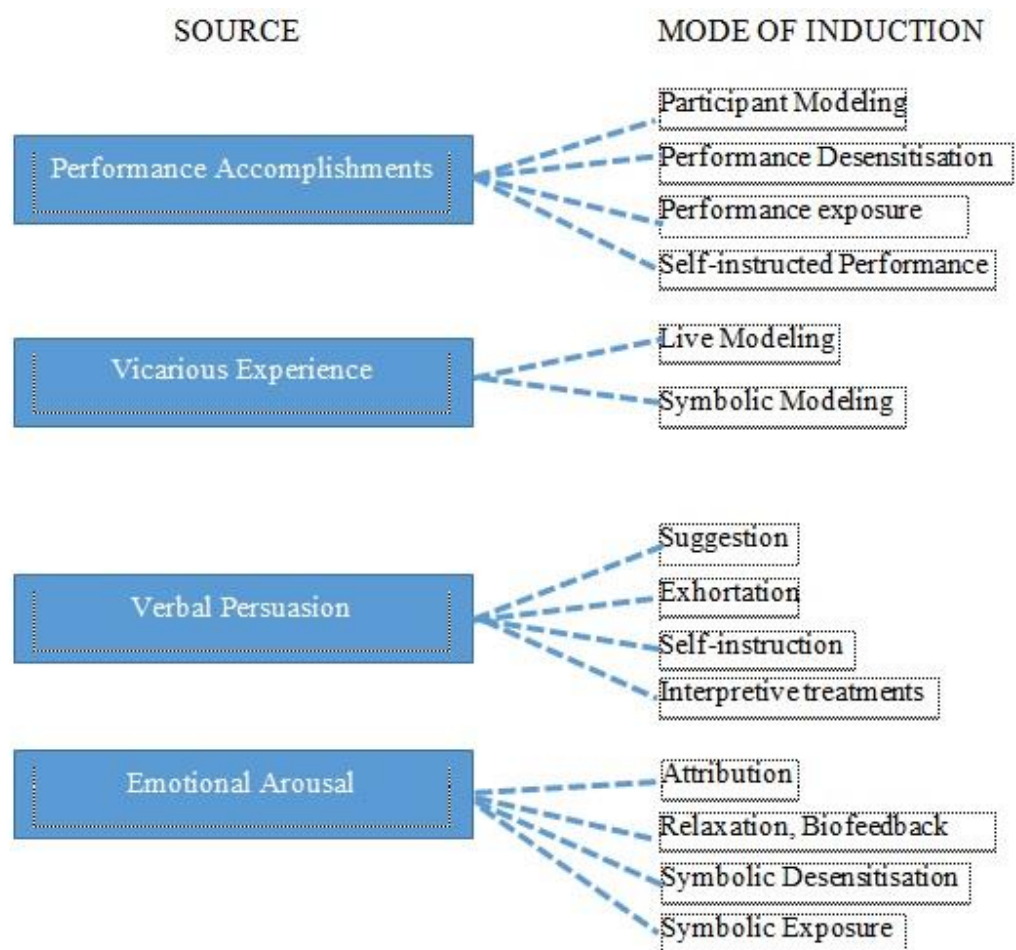


Figure 62 Principal sources of efficacy information and the major sources through which different modes of treatment operate

The four major components of Bandura's Self-efficacy are as follows:

First, Performance Accomplishment (Mastery Experience): This component has proved to be the most effective way to develop and maintain individual behaviours (Bandura 1977, 1986, 1997). Bandura (1977) explained that self-efficacy beliefs will increase if the person has repeatedly viewed his or her experiences as successes. Conversely, self-efficacy beliefs will decline if these experiences were repeatedly viewed as failures (Bandura, 1977). However, occasional failures that are later conquered by steadfast effort can strengthen self-motivated persistence if the person discovers through his or her experience that even the most challenging barriers can be mastered by sustained endeavour. Once the person succeeds in performing targeted positive working behaviour, then he or she can also perform other activities which are

substantially similar or different from the previous performance (Bandura, 1977, 1989, 1993).

Second, Vicarious Experience: Vicarious experience or modelling is experienced as “If they can do it, so can I” (Reeve, 2014). Various expectations are derived by seeing the performance of someone else. This can produce efficacy expectations in observers that they also will improve themselves if they persist in their effort. They convince themselves to perform the same action believing that if others can do it so can they (Bandura, 1977, 1989; Bandura & Barab, 1973).

Third, Verbal persuasion: Verbal persuasion is used to build self-efficacy and enhance performance through guided encouragement (Bolt & Koh, 2001). Giving verbal reinforcement is widely used in order to influence individual behaviour due to its ease as well as ready availability (Bandura, 1977, 1982, 1989). Strong encouragement can boost individuals’ confidence enough to enhance the first effort toward changing behaviour (Bandura, 1977; McAlister et al., 2008). Bandura (1977) stated that expectations of personal efficacy induced in verbal persuasion are probably weaker than those based on one’s own performance accomplishments. This is because this manner does not provide an authentic experiential base for people. However, the extent of verbal persuasion influencing self-efficacy has been hypothesised to depend on the credibility, prestige, trustworthiness and expertise of the persuader (Bandura, 1977).

Fourth, Emotional Arousal: Emotional arousal is an additional source of information informing the self-efficacy of individuals in coping with threatening situations (Bandura, 1977). In the face of difficulties, individuals with high self-efficacy are prone to present low emotional arousal and apply problem-solving coping strategies; while individuals with low self-efficacy more easily exhibit reactive emotions (Bandura, 1982). Bandura (1982) also stated that perceived inefficaciousness in coping with potential threats leads people to approach such situations anxiously; experiencing disruptive arousal may further lower their sense of efficacy that they will be able to perform things skilfully. Positive affective states, such as intellectual interest in a task, exhilaration, happiness and tranquillity, are more likely to induce efficacy judgments than are negative affective ones such as anxiety, fear, depression and sadness

(Bandura, 1986; Feltz & Lirgg, 2001; Maddux, 1995, Monson & Lox, 1996). Both positive and negative arousal can be applied to create different sorts of affective experiences and can be applied to help health professionals and social workers understand their clients regarding vulnerability and virtues in the lineament of adversity (Washington & Moxley, 2013).

According to findings reported in chapters 4 and 5, the difference between feeling confident and feeling unconfident of the second-hand clothing sellers depends on their certainty about their ability to perform health prevention and control. The findings show that enhancing self-efficacy would potentially add to successful health promotion strategies because perceived self-efficacy is considered as a very important component of HBM to encourage positive work behaviour. When considering in detail the types of self-efficacy that are evident in the second-hand clothing sellers, it could be concluded that three types of self-efficacy (i.e., vicarious experience, verbal persuasion, and emotional arousal) appeared in both the interview and observational data influencing the adoption of healthy behaviours. The details, including some examples of the current findings about the types of self-efficacy which are evident in second-hand clothing sellers as well as examples of enhancing perceived self-efficacy that could be enacted in practice with a particular focus on the findings, are presented in the following section.

-Enhancing vicarious experience

This follows the suggestion of Glanz et al. (2008), of showing individuals that others like themselves can do it. This should include detailed demonstrations of the small steps taken in the attainment of a complex objective. The vicarious experience of second-hand clothing sellers may happen by observing someone else such as skilled workers performing positive work behaviours in order to prevent health problems arising. This can help the sellers to perform the same behaviours by imitation and they are likely to think that they could be able to achieve at least some improvement in their performance. I observed that in order to move the 100 kilogram clothing bale without lifting aids, the sellers need to have a specific technique. There are a few informants in the study moving bales with proper techniques by learning from or observing other skilled workers. For example, a long-standing male informant who lifts and moves

clothing bales with the correct technique stated that he noticed the lifting technique from other workers who are skilful. The technique is easy and useful because it can prevent him from suffering waist or back pain.

Observing how someone else handles a situation by performing positive work behaviour can help the sellers to perform the same task by imitation. If they succeed in performing this behaviour, other sellers are more likely to think that they will succeed as well, if the behaviour is not too difficult. The effects of role-modelling become important here as observing people who are similar to themselves succeed will increase second-hand clothing sellers' beliefs that they can master a similar activity. Mancini (2007), studying the role of vicarious experience via self-help peer role models, supported the view that the existence of peer support was a key factor in the informants' recovery. The results show that being exposed to individuals who had similar experiences and had achieved recovery provided them with hope that recovery was possible. This realisation motivated them to engage in activities that would help them move forward in their recovery.

- Enhancing verbal persuasion

The concept of verbal persuasion in Bandura (1977) points out that self-efficacy illustrates the importance of encouragement from others influencing confidence to enhance the effort toward changing behaviour. The current findings indicate that verbal persuasion strongly influences the second-hand clothing sellers' motivation to change their work behaviours. Most informants who have positive work behaviours were motivated and convinced by persuaders who are trustworthy and credible. For example, a long-standing informant who has used a mask regularly while exposed to clothing dust described that she made a decision to wear the mask because of suggestions and encouragement from her daughter, doctor and customers.

In order to enhance self-efficacy through verbal persuasion, the sellers could be told that he or she can do positive work behaviour; for example, "You can move a bale with the correct posture" or "You can wear a mask continually". This is because encouragement by telling the person that he or she can do it can boost confidence enough to induce efforts toward behaviour change (Glanz et al., 2008). Moreover,

persuasive communication is more effective when people who provide this information are viewed by clients as knowledgeable and reliable, and the information is realistic (Bong & Skaalvik, 2003). Positive persuasive feedback heightens self-efficacy, but verbal persuasion alone is limited in its power to create an abiding sense of self-efficacy (Schunk, 1991; van Dinther et al. 2011).

- Enhancing emotional arousal

Emotional arousal is an additional source of information informing the self-efficacy of an individual in coping with a threatening situation (Bandura, 1977). In the face of difficulties, individuals with high self-efficacy are prone to present low emotional arousal and apply problem-solving coping strategies; while individuals with low self-efficacy more easily exhibit reactive emotions (Bandura, 1982). Bandura (1982) also stated that positive affective states, such as intellectual interest in a task, exhilaration, happiness and tranquillity, are more likely to induce efficacy judgments than negative affective states, such as anxiety, fear, depression and sadness (Bandura, 1986; Feltz & Lirgg, 2001; Maddux, 1995, Monson & Lox, 1996). Informants in the study who perceive that risk prevention is necessary and they are happy or exhilarated to protect themselves from the health risk also have positive behaviour. For example, a long-standing informant mentioned that a mask is necessary and he cannot further his work without it. For this reason, enhancing positive emotions for taking health action such as using a mask is necessary for health promotion provided to the sellers. Consistent with the study of Mancini (2007), reducing emotional and cognitive distress and anxiety may help facilitate the development of perceived self-efficacy.

Apart from enhancing vicarious experience, verbal persuasion and emotional arousal, performance accomplishment or mastery experience is one of the main components of self-efficacy. According to the interview transcripts, however, there were no informants in the study who mentioned their previous successes of preventive health actions influencing their current health behaviours. Although this type of self-efficacy is not evident in the collected data, several studies indicate that the mastery experience is the strongest influence on perceived self-efficacy (Bandura, 1997; Pendergast et al., 2011). It is thus appropriate to apply this, especially in a regulated workplace that

consists of employees and leaders in the workplace such as supervisors or managers (Gong et al., 2009; Luthans & Peterson, 2002).

The relevant studies indicate that human emotion arises from social interaction (Benight & Bandura, 2004; Kemper, 1978; Uvnäs-Moberg, 1998). Uvnäs-Moberg (1998), who studied the relationship between the oxytocin hormone, positive social interaction and emotions, indicated that during social interactions, the oxytocin hormone can be released by sensory stimuli perceived as positive emotional states, including warmth, smell, and touch. The relevant studies also describe the advantage of social support as it has been demonstrated to reduce depression and stress and so enhance personal health (Benight & Bandura, 2004; Fenlason & Beehr, 1994). Fenlason and Beehr (1994) revealed that it affects workers' stress levels by supportive communication between the stressed individual and others. While other studies indicated that social support and social relationships improve physical and psychological well-being, both directly and as stress-buffers. Also, these supports buffer the dangerous physical and mental health impacts of stress exposure (Cassel, 1976; Cohen & Wills, 1985; Thoits, 1995, 2011; Uchino, 2004). Consequently, a strategy to enhance social relationships and social support for the second-hand clothing sellers is necessary to prevent the impact from negative emotional reactivity, such as stress, from the other sellers.

According to Social Cognitive Theory (SCT) (Bandura, 1986, 1991, 1997, 2005), the study posited that personal, environmental and behavioural factors determine an individual's behaviour change in a sequence of operations. He also stated that environmental factors, i.e., social and physical factors, influence directly personal self-efficacy to perform healthier behaviour. Also, changes in social support influences health behaviour primarily through self-efficacy (Bandura, 1997). The relevant studies also indicated that the four major sources to self-efficacy: performance accomplishments, vicarious experience, verbal persuasion and emotional arousal, are related to social support; for example, supervisors, health care providers, friends, family and significant others (Anderson et al., 2010; Guan & So, 2016; Leahy-Warren et al., 2012; Lee & Ashforth, 1996; Olander et al., 2013; Shoji et al., 2014). Olander et al. (2013), for example, who studied the most effective techniques in changing physical activity among obese people, concluded that planning how to draw out social

support for the targeted behaviour from other persons may help people feel more in control over the accomplishment of physical activity by receiving practical support with barriers such as work or family commitments. Feeling supported may help people cope with failures and relapses from the activity and these also associate with increased self-efficacy and physical activity.

Cutrona and Russell (1990), who studied social support and specifically stress, concluded that there are five dimensions of social support influencing self-efficacy; these are: emotional support, esteem support, information support, instrumental support and network support. While other studies adopting Tardy's (1985) model, one conceptualisation of social support developed from the work of House (1991) who studied work stress and social support, indicated that there are four dimensions of functional social support: information support, emotional support, instrumental support, and appraisal support (Langford et al., 1997; Leahy-Warren et al., 2012; Malecki & Demaray, 2003; Miller & Davis, 2005; Tardy, 1985). Also, structural social support has two dimensions consisting of formal (health care providers) and informal social support (friends, family and significant others) (Leahy-Warren et al., 2012; Miller & Davis, 2005).

Apart from social support influencing the self-efficacy of individuals, some studies have indicated that social support is derived from one's family and social relationship, which has been conceptualised and measured in various studies as ties to spouse, friends, family and other social groups (Bowlby, 1969; Orr, 2004; Stansfeld et al., 2006). The behavioural aspects of personal relationships include parts of social interaction whose content and quality need to be assessed as episodes of social support. Some studies show the relationship between social relations/ties and health communication as people can use social relationship to transmit health information; i.e., communication takes place within an interpersonal or social relationship (Brown et al., 2007; McQuail & Windahl, 2015; Money et al., 1998). Bandura (2001) studied social cognitive theory and mass communication, and explained that the transmission of information occurs within social relationships rather than in ties that explain adoptive behaviour. Bandura (2004) also stated that managing social relationship is necessary for health promotion.

6.3 Summary

Health promotion strategies have to be embedded in the social fabric of the market place. This is because health promotion aims to work with people in the “settings” of their everyday life, focusing on building up “healthy workplaces” rather than focusing on people at risk from specific conditions or already in contact with the health services. Promoting knowledge, beliefs including self-efficacy are the ways in which it could be adopted into the social fabric of the market. The future direction recommended for health promotion strategies for second-hand clothing sellers seems to be difficult to arrange as long as there are no authorities or health staff to take direct responsibility for the sellers at their workplace. At the moment, health knowledge and information obtained through interpersonal information sharing by face-to-face communication is considered to be the easiest way to enhance positive work behaviour for the sellers by providing or sharing information and knowledge about work-related health problems between friends, customers, family members or between health professionals in health care services and the workers. For future direction, a health promotion strategy to enhance second-hand clothing sellers’ beliefs including self-efficacy can be applied as a guideline to promote health for the workers. However, the success of health promotion depends on the second-hand clothing sellers themselves in terms of how much precedence they give to work-related health problems and the health issues arising from their working conditions.

Chapter 7: Discussion

7.1 Introduction

In the previous chapters, I have demonstrated the differing perceptions on beliefs regarding health risk and risk prevention of second-hand clothing sellers based on the six key constructs of HBM theory. Also, their preventive health behaviours are identified before describing how the beliefs influence the workers' preventive health behaviour. Moreover, I describe the future direction recommended for health promotion strategies for second-hand clothing sellers. The findings so far contextualise these concepts from the perspective of second-hand clothing sellers. However, for the comprehensiveness of the study, along with the study results and discussion of the results (chapters 4-5), and the implication of the results for health promotion strategy (chapter 6), the cause of the results is considered and presented in the discussion chapter (chapter 7).

For future direction, before developing a strategy to promote health for second-hand clothing sellers, considering the causes underpinning the problems is necessary. After considering the causes of the problem through the results and all the collected data, limitations to access information and knowledge are considered as being the main cause of the inadequate beliefs influencing the work behaviours of second-hand clothing sellers that links to the results in chapters 4 and 5 and the implications of the study in chapter 6. The limitations to access information and knowledge are categorised into three aspects: the limitation of personal experience; the characteristic of local cultural including the social context of second-hand clothing sellers; and limitation from the health service system.

7.2 Discussion

In the discussion chapter, the findings in the previous chapters are reviewed. The results of the review initially highlight “the limitation to access the information and knowledge about health risk and preventive health behaviour from working

conditions”. This problem is associated with the results in the previous chapters and needed for a health promotion strategy as presented in figure 63.

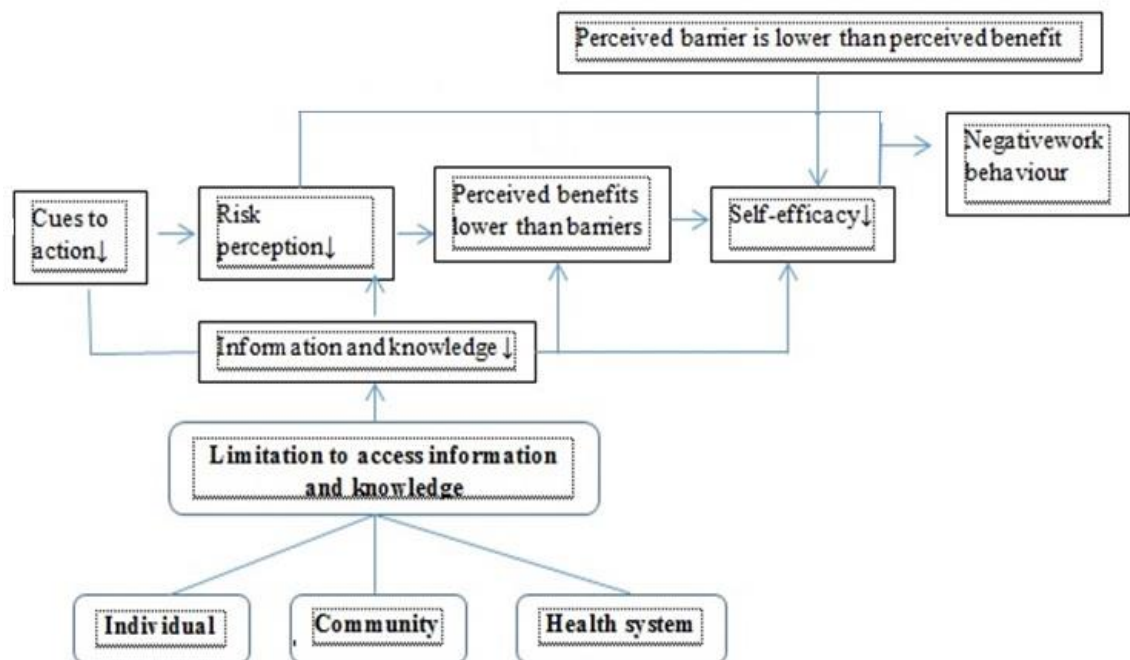


Figure 63 Impact of limitation to access information and knowledge toward health beliefs

According to figure 63, arising from the findings in chapter 5, lack of knowledge and cues to action are the initial factors that influence the negative work behaviour of second-hand clothing sellers as it affects the other components of health beliefs including self-efficacy associated with positive or negative work behaviours. From both internal and external cues of second-hand clothing sellers from the collected data of the study (fieldnotes, fieldwork and research transcripts), the result of the review was to highlight the limitation to access information and knowledge which then induces the occurrence of limitation of receiving knowledge from others (cues to action) and lack of knowledge (themselves). The finding shows that the causes of this limitation are from the second-hand clothing sellers themselves, their workplace (i.e., second-hand clothing markets) which is considered as a second-hand clothes community, and from the health system. The limitation to access information and knowledge is categorised into three aspects based on the major cause of problem, as follows: the limitation of personal experience; the characteristic of the local culture

including the social context of second-hand clothing sellers; and limitation from the health service system. The details of each aspect are now discussed.

7.2.1 The limitations of personal experience

Because knowledge is continuously derived from and tested out in the experiences of the individual (Choo et al., 2013; Kolb, 2014; Thorne et al., 2002; Zhou, Fang & Wang, 2008) as well as from cues, or stimulus, to action which could be created through personal experiences for initially changing health behaviour (Amason & Lee, 2015; Farooqui et al., 2013; Meillier, Lund & Kok, 1997), an individual who has limited experience about something, such as health problems, is less likely to gain knowledge as well as cues to take an action regarding those things that he or she has limited experience of. Furthermore, personal experience is a particularly powerful stimulus to take an action on protecting health (Grothmann & Reusswig, 2006; Weinstein, 1989; Whitmarsh, 2008; Zhou, Fang & Wang, 2008). Personal experience with regard to health risk tends to come from a variety of sources of information consisting of: direct experience (i.e., personal symptom); and indirect experience (i.e., word of mouth/eye witnesses) (de França Doria, 2010; Fitzpatrick-Lewis et al., 2010; Kasperson et al., 1988; Whitmarsh, 2008); and from news media (de França Doria, 2010; Kasperson et al., 1988; Slovic & Weber, 2002; Whitmarsh, 2008).

From my observed and interview data, all informants who lack knowledge and beliefs especially about risk perception regarding occupational health issues from their working conditions, indicated many statements linked to limitation of personal experience, either or both direct and indirect experiences. This was described by one of the informants, for example, who has perceived that clothing dust is not hazardous or has a high impact on her health because she never experienced it herself nor heard about its dangerous effects.

“If it has germs in the clothes, the sellers will be infected or have illness. But in fact, I haven’t heard that the sellers have illness from clothes, even though they have been exposed to dust for a long time”

[Female, 35 years old, 9 years’ experience]

“Some might have sold the clothes [without using mask] for a long time, I mean 20-30 years. They still sell the clothes in the markets without having health problems. So I’m not concerned about this (effect from dust). For me, I don’t have any symptom [when I contact to dust] because I don’t have allergy. So, I feel normal when I face to dust without mask”

[Female, 35 years old, 9 years’ experience]

Following the previous paragraph, a long-standing informant who is also not concerned about health issues from clothing dust, although he has been exposed to it for a long time, shared a similar opinion as he never experienced the high impact from work himself or received information from others. It is remarkable that he introduced his friend, who came from a different city to visit him, to me and stated that his friend, a long-standing seller like himself, also does not have a health problem related to working conditions. Also his friend confirmed that he did not use a mask to protect himself from clothing dust like the informant.

“I never experienced a dangerous effect from selling clothes. I never heard about this as well except allergy from dust. But it affects only allergic person. I mean no one has a big health problem from this job. For me, I have a little (health) problems such as a little pains and aches of muscle. I think it’s the common health problems as people can normally have”

[Male, 55 years old, 30 years’ experience]

The previous excerpts illustrate the importance of illness experiences influencing understanding of vulnerability of work-related health problems. It means that individuals who never experience health issues, such as experiencing respiratory problems from clothing dust by himself, herself or from others, may not understand or perceive that he or she risks developing respiratory problems due to dust exposure. The previous excerpt also reveals that the length of time and having long-standing experience of working in the market does not influence the risk perception of work-related health problems as long as they do not have experience of illness, having symptom(s) themselves or experience of illness from others. Moreover, in the eyes of some informants, from their own experiences, they perceived that the health issues arising from work exposure may be difficult to see even with the long-standing

workers who are exposed to the health risk for a long time. As the informant stated, some workers, whom they know, have long-standing experience with work exposure, such as dust exposure, but do not have health concerns. This makes them feel unconcerned while exposed to health risk or reduces their risk perception of health risk from work. While some long-standing informants who do not have health issues from second-hand clothes working conditions or even experience from their peers, perceived the health risk of work exposure as the normal problem and does not make them feel concerned. The lack of their risk perception also links to time spent at the market. So, the longer the experience, the harder it is to make information-giving work. As the relevant studies reveal, familiarity with the job risks, for example, acquired by daily exposure, lowers the perceptions of its riskiness; the more the familiarity, the more the lack of risk perception (Weber, 2006). Also, perhaps this familiarity makes the workers less alarmed by information provided regarding a minor increase in risk (Viscusi, 1993). However, familiarity alone has little effect on risk perception. It needs to be combined with other factors such as knowledge, previous experience or desensitisation to the threats (Song & Schwarz, 2009).

Apart from the lack of personal experiences of the informants, the opportunity for interpersonal information sharing is considered as it is also one of the important causes of limitation of personal experience, by not receiving information about others' experiences. Even though some informants had experience regarding health risks or health problems from their own working conditions (i.e., their symptoms) or had experience from fellow second-hand clothing sellers (such as visiting a friend or co-worker in hospital), they did not pass their experiences to each other. This is because of the limited time for selling clothes in the markets. Also, unfamiliarity with each other leads them to discard talking about this topic as explained by a long-standing second-hand clothing seller. He perceived their vulnerability and the severity of the risks after he had visited his friend in hospital. However, he did not inform other sellers in the market about this due to a lack of time.

“During the time in the market, I have to separate and select clothes around 4-5 bales. So, I am really time-consuming and difficult to chat with others in the market” [Male, 41 years old, 20 years' experience]

Furthermore, apart from personal experience, one difficulty of accessing information from other second-hand clothing sellers is the limitation of socially mediated pathways. From my observational data, most media and communication pathways used by the sellers working in the markets were for face-to-face conversation and speaking on their mobile phones. Although there were some informants who could access information by using the internet and social media, they used these methods just for business benefits; in particular, for selling their merchandise through shopping online.

“I use social network such as Facebook just for selling my clothes. It’s work. So, I plan to set up my online shop in the future”

[Female, 38 years old, 15 years’ experience]

This excerpt demonstrates a consequence associated with a lack of concern of the sellers due to insufficient risk perception. It means that even though online media including social networks have been accepted as an important source of dissemination of health information (Fox, 2011; Greene et al., 2011; Scamfeld et al., 2010; Weaver III et al., 2010), internet users may ignore easily accessible health information resources that could assist in maximising their health (Weaver III et al., 2010). The study of Weaver III et al. (2010) revealed that several potential determinants of why so many people apparently ignore seeking health information are lack of media literacy and poor health literacy linked to the health perception of the individual. Also, they aimed to further expand understanding of the linkage between health perception and health information-seeking behaviours.

For getting information through media news, there was little media news regarding health risks or health problems relating to second-hand clothes made available to people. Almost all the news available mentioned health risks from germs and also stated that health care providers suggested second-hand clothing customers wash the clothes with hot water before using them. While some of the news also mentioned allergies from clothing dust and suggested that customers should wear a mask during the time of purchasing second-hand clothes. Notably, there was no news mentioning health risk or providing suggestions specifically targeting second-hand clothing sellers.

However, the news available through mass media about health problems from second-hand clothes did not affect the risk perception of most second-hand clothing sellers. This was described by one informant, for example, who received news regarding skin problems from unwashed second-hand clothes, but said she was not concerned about this because she did not have skin symptoms.

“I heard news that customers buying [second-hand] clothes at Rong-Kler market [Sar-Keaw province] were infected with germs and got skin issues. I’m not concerned about this because I, my family or even my customers don’t have this issue. If the news was true, I think...nobody wants to buy second-hand clothes. But in fact, there are a lot of customers go to this market. It doesn’t have any impact from the news. So, I think the clothes may not have a big impact to customers, otherwise, it doesn’t have a lot of customers who want to go there”
[Female, 35 years old, 8-9 years’ experience]

The previous excerpt demonstrates that personal information sharing, as a two-way communication process, influences personal risk perception more than general media messages, as a one-way communication process, because two-way communication can be fluid and interactive with the contribution of both narrator and listener(s) (Chen et al., 2010; Chivuno-Kuria, 2013; Lin & Lu, 2011; Morton & Duck, 2001; Slade et al., 2015; Walther et al., 2010). Also, the relevant studies state that communication regarding health risk or risk communication more often involves two-way communication (Kellens et al., 2013; Lundgren & McMakin, 2013).

The previous statements including excerpts demonstrate several causes of limitation to access information and knowledge of individuals as presented in figure 64

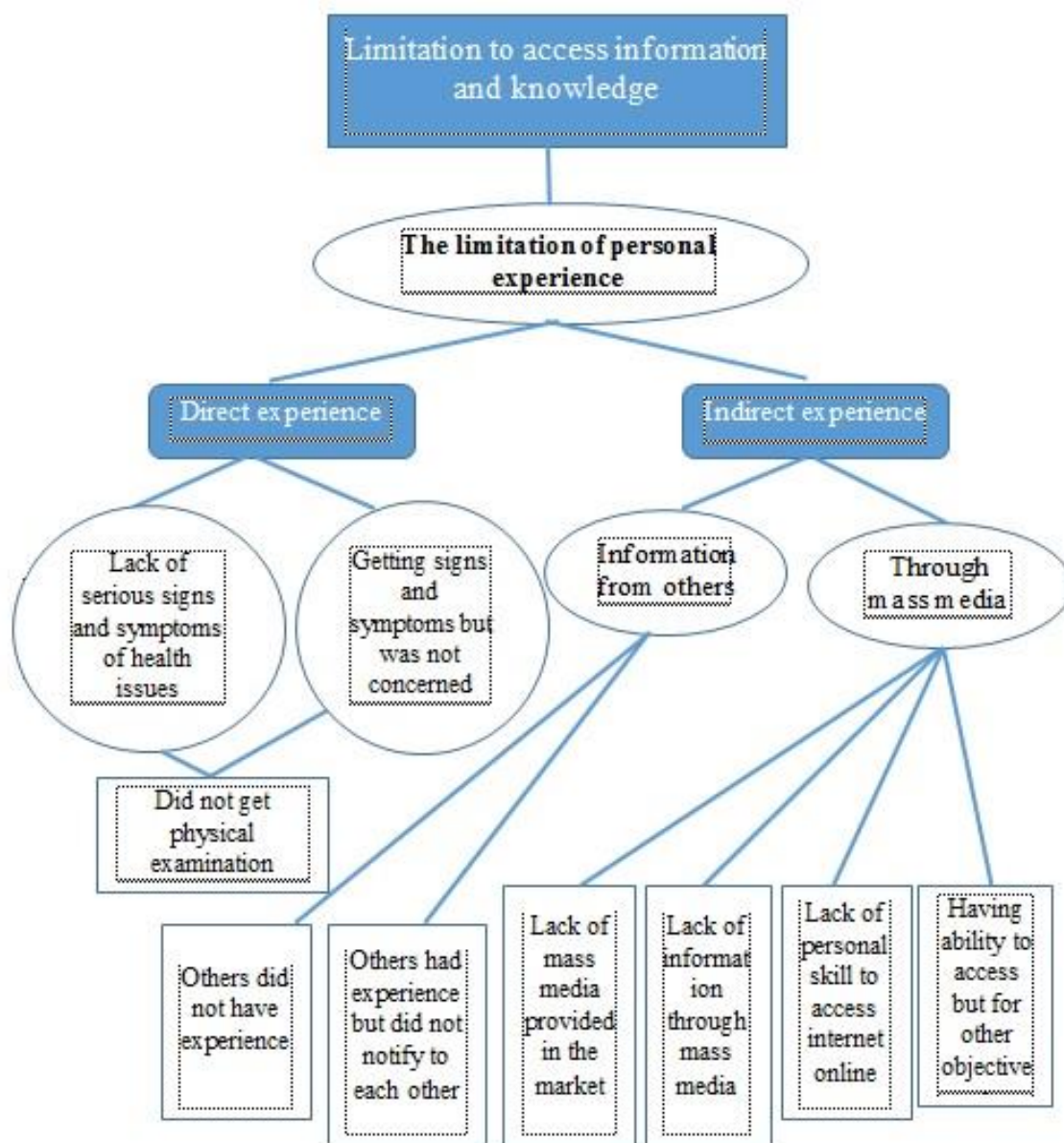


Figure 64 The causes of limitation to access information and knowledge of second-hand clothing sellers

The diagram shows several causes of limitation to access information and knowledge of second-hand clothing sellers. Following the suggestion of de França Doria (2010), information about what we study can be obtained from a variety of interpersonal and impersonal sources or through direct experience and by information from the experience of others. Also, in order to make the diagram easier to understand, the limitation of personal experience is categorised into two aspects; direct experience (i.e., personal symptoms) and indirect experience (i.e., receiving information about work-related health problems through interpersonal and mass media communication).

The detail presented in the diagram was drawn from interview transcripts and observational data.

According to limitation of personal direct experience, previous studies explored how signals arise through direct personal experience, making it a major influence on risk perception (Whitmarsh, 2008). The current findings reveal that lack of signs and symptoms is one of the major causes influencing the knowledge and perceived threats or risk perception of second-hand clothing sellers. Also, some individuals had signs and symptoms of health problems but these were not serious enough to concern them, so still lacked risk perception. The current findings are coincident with the result of Weinstein (1980, 1982) which stated that lack of experience with a health issue may make people feel that it is unlikely to happen to them and so their risk perception is below average. Leiter et al. (2009) confirmed a consistent relationship of experience of health problems or injuries with risk perception. They illustrated that workers who had experienced an accident or injuries perceived the workplace as more hazardous than did their non-injured peers or co-workers from the perspective of the individual or department.

It is not surprising therefore that the interview transcripts reveal that many informants believed that whether or not working with second-hand clothes affects one's health depends on a personal condition. This means that the health threats, for instance clothing dust, may not harm the sellers if they do not have health conditions or they are healthy. Also, the state of being healthy is when they do not need medical attention such as being hospitalised, visiting a doctor, or taking medication for treatment purposes.

“Because my health is good, so I think second-hand clothes do not have any impact on my health” [Female, 35 years old, 8-9 years' experience]

“I don't have serious symptoms during the past 30 years for working this job” [Female, 35 years old, 8-9 years' experience]

The previous excerpts illustrate that when individuals do not have symptoms of health issues and view their health as good, despite the fact that they never get physical

health checks, they do not pay much attention to or show concern about the health threats, reflecting what has been well rehearsed in the literature. For instance, as Omanga et al. (2014) mentioned, individuals who view their health as good or excellent were less likely to worry about getting health symptoms. The study also shows that when individuals are healthy or naturally strong, it is easy for them to take their health for granted. Hunt et al. (1980) illustrated that self-rated or perceived health status is important as it seems like a predictor of need for, and utilisation of, health services. Similarly, Jylhä (2009) revealed that positive self-rated health is no guarantee of good physical health, but poor perceived health status certainly warrants further attention of symptoms or health condition. Therefore, ways in which individuals can be encouraged to see their health as not guaranteed, and be given pointers to actual threats to health, may be useful within the social fabric of the market place.

Likewise, the limitation of second-hand clothing sellers' indirect experience consisting of limitation to access information exchanged from others and through mass media, limited their influence to knowledge as well as their perception of health risk. As Brieger (1990) and Hubley (1988) mentioned, health messages are made available through interpersonal and mass media communication. Data illustrated that there were several causes affecting the interpersonal and mass media communication of the sellers. These causes, as presented in figure 64, represented the weakness of interpersonal and mass media communication regarding occupational health risk and preventive health behaviour of the sellers.

These limitations: for example, lack of media service provided in the market; lack of information through mass media; and lack of interpersonal communication, were affected by the context of the second-hand clothing sellers' community and particularly the lack of occupational health service in the local area. From my detailed observation, there were no devices provided by local health services or civic agencies to propagate useful information to the sellers or their customers. According to interview data, even though all second-hand clothing markets are the responsibility of local government; i.e., three of the four markets, the Coconut market, the Night market and the Mazda market, are the responsibility of the Yala city municipality, while the Budee market belonged to the Budee sub-district municipality, there are no health authorities to provide health information or even provide devices for facilitating health

information to the sellers. Also, the interview and observational data from my Master's degree dissertation illustrated that Yala city municipality has a Division of Public Health and Environment. However, providing health information and services for second-hand clothing sellers is not a responsibility of the division (Sirithammaphan, 2011). This limitation is described in section 7.2.3: limitation from the health service system.

With regard to the context of the second-hand clothing sellers' community, the description of the market and their working conditions were not used to build strong relationships in the community. Consequently, lack of exchange of health information among second-hand clothing sellers can be seen in their community. The sellers actually informed and exchanged their experience about health problems with their family members, relatives or close friends. The detail of the limitation of access information due to the lack of social interaction is described in the next section (topic 7.2.2).

According to the concept of individual risk perception, the often implicit notion is that individuals perceive something (and other things) to be dangerous because they know them to be dangerous. Also, the perceivers are merely marking the actual extent of danger to themselves (Douglas & Wildavsky, 1982; Holdren, 1983; Wildavsky & Dake, 1990). As Holdren (1983) revealed, a much simpler explanation about risk perception might suffice; individuals worry most about the risks which seem most directly to threaten their well-being at the moment. Likewise, the risk perception of second-hand clothing sellers depends on whether they perceive health threats to be dangerous or not. They are not concerned most about health threats from working conditions if they do not know about its impact. Consequently, limitation to access the sources of knowledge and information, direct experience, interpersonal and media communication, leads to the lack of knowledge and risk perception of the adverse work-related health problems (i.e., they do not know enough about the health threats to see them as dangerous). As the severity of a work-health related problem is the criterion by which the second-hand clothing sellers decide whether a work-health effect is noteworthy or not, providing information regarding the severity is thus crucial. The strategy to provide information regarding severity of work-related health problem is described in chapter 6.

The impact of these limitations also affects the cues to action, both for individual and environmental events. For example, lack of serious signs and symptoms of health issues influences internal cues, or bodily events. In addition, lack of mass media provided in the market leads to the lack of health communication influencing external cues, or environmental events. The limitations of personal experience which affect both cues link to motivation to take action and also influence the preventive health behaviour of second-hand clothing sellers. As Baldassare and Katz (1992) and Whitmarsh (2008) illustrated, experience not only affects how people perceive and learn about risks but also their behavioural responses. Consistent with the finding of Armitage and Conner (2000), individual experience regarding symptom perception or health communication shapes cues to action and may also prompt the performance of individual behaviour.

In conclusion, the findings of the present study suggest that due to limitations of personal experience, i.e., lack of symptoms or having never experienced the high impact of work-related health problems themselves or received information from the experience of others through interpersonal communication and mass media, second-hand clothing sellers' lack of information and knowledge influences risk perception and the other components of health beliefs. Regarding an appropriate way of information exchange, between workers working in the same market as the community of second-hand clothing sellers, interpersonal communication seems to be very important rather than mass media communication according to the context of the workers. This is because of the limitations to access mass media of the sellers; for example, lack of media provided in the markets, lack of information through mass media and lack of skill to access the internet online.

7.2.2 Characteristics of local context: culture and social fabric of clothing market

According to the social hierarchy, the place where people occupy a social position influences their susceptibility and impact of illness (Marmot & Commission on Social Determinants of Health, 2007). In Southern Thailand, only one study points out that a religious leader has a prominent role in social structure (Sengupta et al., 2006). There are no studies that indicate the informal sectors in Thailand fit within the social

structure. Observational data indicated that second-hand clothing sellers have their social group and community in the market areas but the community's members do not have a close relationship. Generally second-hand clothing sellers know each other or their peers because they work in the same areas and sometimes they do some business together, particularly buying or selling clothing bales, or sometimes discussing with other sellers about their business. They talk, with general conversations, to each other sometimes when they are free from work or do not have customers in the stalls. When they talk in the form of a small group, generally around 2-5 persons per group, there are only second-hand clothing sellers, the sellers and their friends, relatives or customers in the conversational group. The groups gather only during the time when they are free, as selling clothes in the market is clearly their priority and finish quickly as they have limited time for meetings.

Several times when I participated in their group conversions, I noted that the things which they actually talked about or discussed in the group were focused on their everyday life or the second-hand clothing business. I never heard conversations about health risks or health problems from the working conditions or other relevant information about occupational health from them. However, according to the interview transcripts, many informants revealed that they sometimes complained about their health problems from work with others whom they are close to, such as their family members, relatives or friends. Also, a few informants, who still have negative work behaviours, stated that fellow second-hand clothing sellers, with whom they have a close-positive relationship, sometimes informed them regarding their health problems due to working conditions. Nevertheless, they stated that the conversations were just information or news as their conversations were not intended to enhance beliefs or promote positive work behaviour. Also, they did not pay much attention or discuss seriously about this issues. It means that information sharing, as cues to action, about work-related health problems was not strong enough to enhance the risk perception of the listeners. Because quality of information toward risk is important to enhance the risk perception of individuals (Albrechtsen, 2007; Nicolaou & McKnight, 2006; Otway & Wynne, 1989; Rosati & Saba, 2004; Shavell, 1979) including motivation and behaviour of receivers (Albrechtsen, 2007), information sharing, beyond just complaints or simply information or news, was not intended to enhance the beliefs of the listeners and may not have enough motivation for listeners to seek information.

Moreover, individual perception of health risk has been conceptualised as a motivational factor associated with the propensity of the individual to seek information (Chaffee & Roser, 1986; Rimal, 2001; Rimal et al., 1999). This means that second-hand clothing sellers who are listeners will not pay much attention to seek information after receiving information about work-related health problems from their peers if they do not have sufficient perception of risk.

With regard to the current situation, lack of information from fellow second-hand clothing sellers who can share or exchange their experience about work-related health problems with other sellers in the market place becomes one of the important causes of insufficient risk perception among second-hand clothing sellers. This is because most second-hand clothing sellers perceived that work-related health problems are normal problems and insignificant. Also, lack of information from the media due to limitation of media access by second-hand clothing sellers as well as limitation of information through mass media, such as news from TV, also influences the risk perception of the sellers and seems to make it difficult to promote health to the sellers as part of a future plan. Thus, interpersonal information sharing seems to be the most appropriate way for a future plan to exchange illness experience between workers. However, this is based on interpersonal relationship and social interaction (Nicolaou & McKnight, 2006). The relevant studies reveal that interpersonal relationship in the workplace between workers functions as influence-sharing, decision-making and instrumental/emotional support systems (Kram & Isabella, 1985; Rawlins, 1994; Sias, 2005). As such, the quality of interpersonal relationship of workers has important consequences for workers' experiences, including workers' information experiences (Herman et al., 2008; Sias, 2005).

The findings also show the linkage between lack of information from fellow second-hand clothing sellers who can share or exchange their experience about work-related health problems with other sellers and the social context or social environment of the second-hand clothing sellers' community. According to the local cultural and social context of the sellers, limitation of working conditions such as limited working time influences the social interaction of the sellers. Because the second-hand clothing markets are uncertain workplaces, the workers need to spend more time for preparing and clearing their stalls. They have only 4-5 hours in the markets for the whole selling

process which includes preparing the stalls, selling clothes and then clearing the stalls; consequently, they do not have much free time for social interaction. In addition, many sellers sell clothes infrequently. It is only once a week at the Coconut market in Yala province with sellers travelling from other areas, such as Patani and Narathiwat province. They thus do not have a close relationship with the other sellers as they come to the market just for business and need to allow more time for travelling. Relevant studies show that the short time span of community's members for social participation accounts for their low social interaction (Guan et al., 2008; Ramirez-Valles & Brown, 2003), and affects the development of individuating and social identity (Lally & Barrett, 1999; Lea & Spears, 1992), interpersonal relationship (Dholakia et al., 2004; Ramirez-Valles & Brown, 2003), social attractiveness and individual knowledge (Dholakia et al., 2004). As the findings of Guan et al. (2008) showed, lack of time was given as the major barrier responsible for low participation in social activity. Ramirez-Valles and Brown (2003) supported that lack of time is one of the important barriers of community involvement in HIV, such as activism and volunteerism. This may be related to the socio-economic status of people in community. For example, when people are tired from their work, they do not want to participate in the community's activities because of having less disposable time. This may influence the causal relationship between a community's members.

Also, there are several factors affecting the social interaction of the sellers consisting of the limited time spent in the markets, no active involvement of workers in the markets (as their community) and no leader or intermediary in the community, such as health workers or community leaders. As well, my detailed observation indicated that there are many second-hand clothing sellers commuting to sell their merchandise from other areas, such as from Pattani and Narathiwat province. These sellers are isolated from other sellers except their co-workers because of lack of time as the major cause. The relevant studies indicate that social participation (i.e., a personal involvement in social activities that provide interaction with others) can be influenced by economic (Levasseur et al., 2010; Mendes de Leon, 2003), political (Bickerstaff, 2004; Young & Glasgow, 1998; Mars et al., 2008) and community context (Bickerstaff, 2004; Levasseur et al., 2010; Yang et al., 2011). These factors lead to the lack of social interaction in the second-hand clothing sellers' community combined with the insufficient individual risk perception. Not surprisingly, lack of information sharing

regarding work-related health problems including preventive health behaviour between workers in community is apparent.

Additionally, the interviewed and observational data illustrated the lack of social interaction between workers in the market as described by a 33-year-old female informant of 10 years' experience, for example, who commutes from Pattani province to sell second-hand bags at the Coconut market every Saturday.

“Previously, I didn't take care of my health until I had opportunity to have meeting about health in Hat Yai. The meeting was about how to take care our health and the detail about supplementary food as I applied to be a representative of the product. The staffs talked about health risk from clothing dust as they know some of us are the clothes sellers. They suggested us wearing mask as well. After that, I thought I should take care of my health such as wearing mask” [Female, 33 years old, 10 years' experience]

Sadly, she did not share this information with fellow second-hand clothing sellers apart from her family's members, her husband and daughter, who wear masks regularly like her. A reply from her to the question “Why don't you tell other clothes sellers about this experience?” is an example indicating the linkage between the context of the second-hand clothing market and social interaction.

“I don't contact much with other second-hand clothing sellers except my customers and my team. I mean my husband and daughter. I don't have much time to talk with others because I have a lot of customers and I don't know them closely” [Female, 33 years old, 10 years' experience]

The above excerpts indicate the weakness of social interaction within the second-hand clothing sellers' community leading to the limitation of personal information sharing between the community's members. This limitation is associated with the lack of time in the workplace affecting the social interaction of the sellers. Another example, a long-standing informant travelling from Bangkok to buy second-hand clothes at the Coconut market every week, who wore a mask regularly after having respiratory issues such as chest tightness and difficulty breathing, combined with the experience

of respiratory disease from his friend, shared the similar opinion that he never shares his experiences about work-related respiratory problems with other sellers in the Coconut market because he lacks time.

“During the time in the market, I have to separate and select clothes around 4-5 bales. So, I am really time-consuming”

[Male, 41 years old, 20 years’ experience]

Also, conversations regarding work-related health problems are not the normal topic when workers in the market regularly talk, especially when talking with others who do not have a close relationship.

“I’m not sure this is the important topic for others. I think even though I have time to talk with them, I still don’t want to tell them especially if I’m not close to them” [Male, 41 years old, 20 years’ experience]

The previous excerpts illustrate not only the linkage between the context of the second-hand clothing market and social interaction that influences limitation of information sharing, but also is associated with other relevant factors which influence the information sharing of people in the community. The other factors consist of: how people interact and the kinds of information that they share; what is shared; and what is or is not illuminating; these seem to be important features in the findings. This is consistent with several studies which indicated that individual and group contacts, communications and interactions, foster trust and relationships to enhance sharing behaviours (Boudreau & Robey, 2005; Hatala & Lutta, 2009; Kim & Lee, 2006; Yang & Maxwell, 2011). Also, the kind of information, the individual who shares and who receives the information, and what is shared also matters to information sharing (Cress et al., 2006; Yang & Maxwell, 2011). These are also useful for the future plan for a health promotion strategy for health authorities, at least at the provincial level, as this may point to the kinds of information sharing that will work for health promotion for second-hand clothing sellers.

7.2.3 Lack of community risk perception

As my detailed observation indicates, normally the conversations between workers are not focused on work-related health problems or preventive health behaviour. Consequently, personal information sharing about occupational health in the second-hand clothing market as their community seems to be an irregular expression. It means that the social milieu in the second-hand clothing market does not contribute the opportunity of personal information sharing regarding work-related health problems and risk prevention between the workers. The relevant studies indicated that social milieu enables interpersonal communication by allowing people to create and share their information (Zhong et al., 2011).

The limitation from social milieu or social environment leads to the lack of risk perception of community members or lack of community risk perception. Consistent with the study of Bickerstaff (2004), social and cultural factors affect the way in which people interpret and make sense of risk regarding air pollution issues. Also, the relevant studies indicate that risk perceptions of people in a community are influenced by the local context or social environment of the community (Fitchen et al., 1987; López-Marrero & Yarnal, 2010; Moos, 2003; WIKSTRÖM & Loeber, 2000). Figure 65 below shows the linkage between the socio-cultural context and limitation to access information of second-hand clothing sellers.

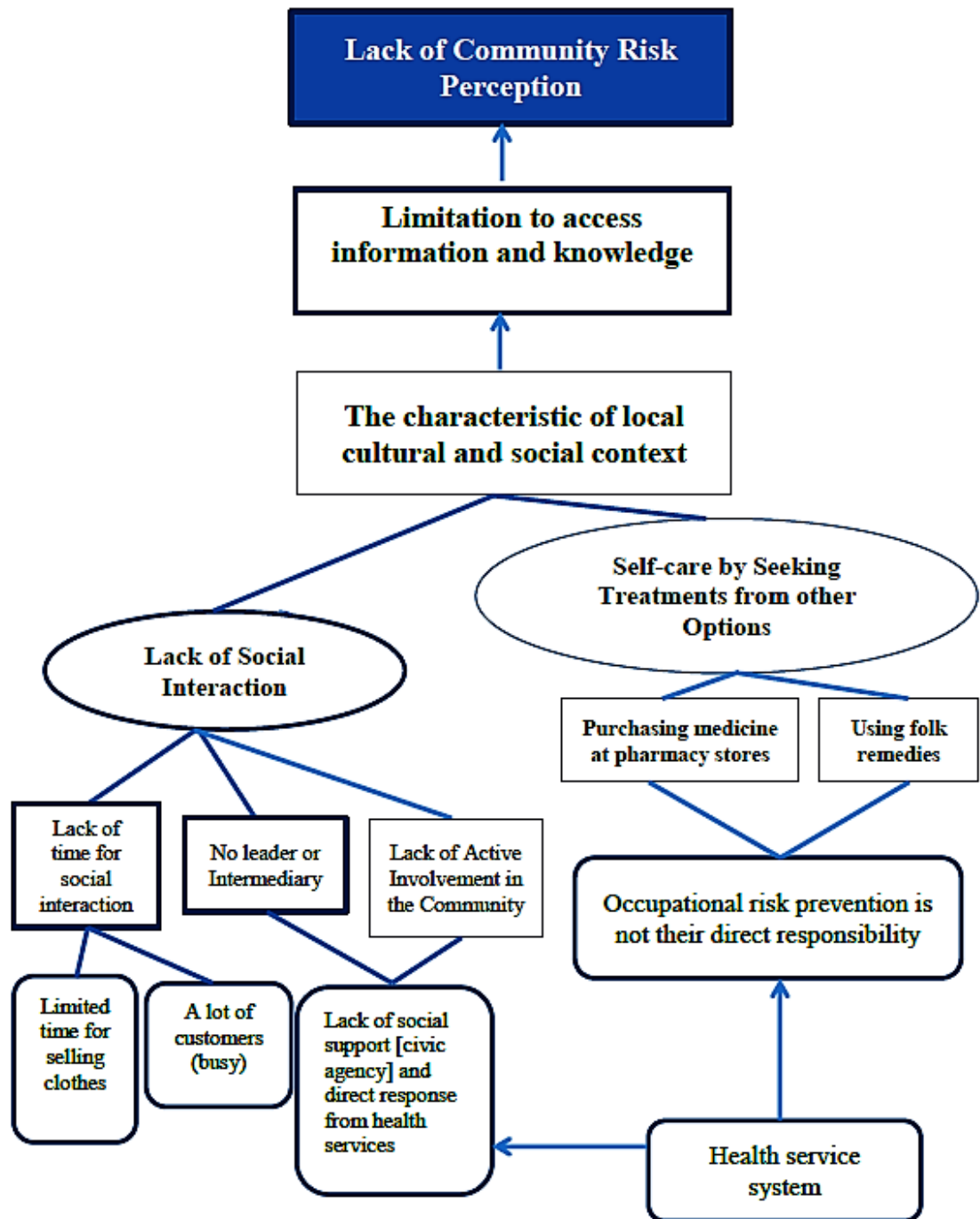


Figure 65 Socio-cultural context related to limitation to access information of the second-hand clothing sellers

According to figure 65, the present study indicated that inadequate social participation in the second-hand clothing sellers' community leads to lack of information exchanged among the community's members influencing community risk perception.

This illustrates the weakness of the health service system in Thailand. The limitation of the health service system affects the health information exchange, knowledge and risk prevention and control of second-hand clothing sellers as there are no authorities or health staff to take direct responsibility for the sellers at their workplace as presented in chapter 1. Consequently, enhancing policy and authority in regard to the health service system is considered to be part of the strategy to promote health for the sellers. Apart from the lack of community participation, the other main cause associated with the social context of second-hand clothing sellers influencing the access of health information and knowledge of the sellers is the limitation of interpersonal information sharing regarding preventive health behaviour between workers and folk healers as well as workers and local drug store personnel.

According to the lack of active involvement of second-hand clothing sellers' community, therefore, enhancing more active involvement of the second-hand clothing sellers' community could be considered as one of the strategies to promote health and wellbeing for second-hand clothing sellers. As Litt et al. (2011) revealed, community participation or involvement captures engagement in local activities (Litt et al., 2011). It is a strategy that provides people in the community with the sense that they can solve their problems through collective action and careful reflection. This strategy is likely to be important for how a community responds to risk, as community risk perception, and links to the risk communication of the community (Glik, 2007).

The involvement of the community or community participation in health is defined as the process by which members of the community, either personally or collectively and with varying levels of commitment, become involved (Zakus & Lysack, 1998). While the word "participation" is interpreted as "collaboration" in which people "voluntarily", or as an outcome of incentive or persuasion, agree to cooperate with an externally determined project in return for some expected benefits (Kahssay & Oakley, 1999; Morgan, 1993; Morgan, 2001). Also, the community participation in health needs to be supported from health agencies including funding (Banteyerga, 2011; Minkler, 2005). However, for a group of informal workers who lack official support and funding, such as second-hand clothing sellers, community fundraising and the use of volunteers in health education, counselling and care is still necessary (Asthana & Oostvogels, 1996). This may benefit public health, if most people self-care; a further

benefit to public health would be the reduction of the number of patients using the health service (Kennady et al., 2007).

According to community participation, the structural obstacle of continuing community participation is the subsequent neglect of the socio-cultural, political and economic context of the community that left planners inadequately equipped to design and implement strategies for risk prevention (Asthana & Oostvogels, 1996). Regarding the detail of community participation for occupational risk prevention, the most influential approach to the issue of attention or inattention to risk is from “social amplification”, which is defined as “hazards interaction with social, cultural, psychological and institutional processes in ways that attenuate or amplify public responses to the particular risk events” (Fromm, 2005; Kaspersen et al., 1988). Amplification occurs in the stage of the transfer of information about the risk, and in the response mechanisms of the community (Kaspersen et al., 1988). The study also illustrated that direct personal experience, risk events and information about risk could reach the individual through two primary communication channels: networks-informal personal networks; and the news media (Frewer, Miles & Marsh, 2002; Kaspersen et al., 1988). Informal personal networks, on the one hand, were claimed to be one of the principal carriers of knowledge between groups of people because this communication could represent a crucial channel of knowledge (Dahl & Pedersen, 2004). Regarding the study of Maskell (1998) and Maskell et al. (1998), the creation of informal networks for communications goes through several stages, from relations between two persons to entire networks.

Apart from the lack of community participation, the other main cause associated with the social context of second-hand clothing sellers influencing the access of health information and knowledge of the sellers is the limitation of interpersonal information sharing regarding preventive health behaviour between workers and folk healers as well as workers and local drug store personnel. According to chapters 4 and 5, because the sellers believe that work-related health problems such as allergic symptoms, muscle pain and back pain, are not a matter of great concern to them unless the adverse effect of health risk is manifest. Also, they may take control over these health issues; thus, they prefer to manage health problems by themselves. The most preferable and usual form of self-care is that the sellers seek to relieve their symptoms,

especially allergic symptoms, muscle pain and back pain, by purchasing medicine at a drug store and using folk remedies. The relevant studies support the findings by indicating that self-medication and using folk healers are common behaviours of Thai patients (Boonphadh, 2008; Okanurak et al., 1991). Consistent with the study of Suraratdecha et al. (2005), for ambulatory care in Thailand, self-care by purchasing medicine at a drug store, visiting traditional healers or use of local or traditional medicine, was still the most usual and the first treatment seeking method among respondents. The second-hand clothing sellers who are in favour of traditional healers or self-medication mentioned the main reasons influencing their decision to seek these options consisted of convenience, effectiveness, cultural value and unsatisfactory health service system. Most informants prefer to receive the treatment from the two options mentioned earlier to manage health problems rather than getting treatment from health care providers in the local health services. The detail about reasons why second-hand clothing sellers did not prefer to receive the treatment from local health service is presented in section 7.2.3.2; limitation to access the local health services.

As described earlier, most informants prefer to primarily get the treatment from the two options listed above as the first treatment seeking method unless the high impact of work-related health problem is manifest. Then, they will elect to get the treatment from the health care services or public health institutes such as a health centre or community hospital. However, only one informant who lives in the remotest area or rural community stated that her husband who is a second-hand clothing seller and her co-worker preferred to get the treatment from the local health service as the first option because of the low expenses involved and its effectiveness. I noted that she wears a mask all the time, even when she sells second-hand towels with her customers.

“Apart from my customers [who convinced her to use a mask], my husband suggest me wearing mask as well. Initially the health care providers working in a primary care in my village suggested my husband wearing a mask while exposing to dust. Sometimes they gave him a mask as well. Then he suggested me. As you see we wear masks together”

[Female, 44 years old, 15 years’ experience]

Also, a few informants, who use masks regularly as personal protective equipment,

one of whom is healthy and does not have a health condition while the other two informants have dust allergies as their health condition, shared the different opinions as they prefer to get treatment from a private clinic in the town of Mueang district, Yala province because of its convenience and because it is more effective than getting the treatment from the government hospital or local health service, despite the fact that they have to incur higher expenses for the extra charge. It means that, even though private clinics in town for which the services are obtained are more expensive, evidently, receiving more costly treatment and travelling further for the treatment is practised among second-hand clothing sellers as long as the treatment proves effective, thus enabling them to continue working. It is also due to the convenience offered, such as by avoiding time-consuming travelling, as described by one of the informants who prefers to get the treatment from a private clinic because of its convenience and effectiveness. Also, one of the people who convinced her to use a mask is a physician in the private clinic where she prefers to be treated when she is sick.

“Once I came to the [private] clinic to see a doctor because I had a cold, he asked me about my job. When I told him that I sell second-hand clothes, he then gave me advice. He suggested me wearing a mask when I am exposed to dust such as when I check the stock. I can inhale dust into my body if I don’t wear a mask. As I told you, I think it’s better to protect myself. He also said don’t ignore using it. Although I am now feeling OK, I probably have the health problems in the future if I don’t wear a mask for a long time. Also, it is because I inhale dust every day” [Female, 45 years old, 20 years’ experience]

The previous statements demonstrate that although there are a small number of informants receiving treatment from the local health service and private clinics as the first option, all of them indicated the professional advice and encouragement as cues to action to prevent respiratory problems from arising. The expenditure on the private clinics is acceptable as they are not excessively expensive; it costs approximately 300-500 baht (£6.0-10.0) for the average cost of a clinic visit (each time). Most informants prefer to buy medicine at the local drug store due to the lower expenditure and greater convenience compared to getting the treatment from a private clinic (approximately 25-200 baht or £0.5-4.0). Also, some second-hand clothing sellers

suffering muscle pain seek treatment from a folk healer from the local area or a nearby village rather than the health care providers including Thai traditional medicine practitioners who work in the hospital due to convenience. Also, the cost of this option is not expensive, 100-300 baht (£2.0-6.0).

Notably, from my observational data, all informants who prefer to take remedies from the health service and private clinics used masks as personal protective equipment regularly and mentioned that they all were encouraged to wear a mask by either physicians from private clinics or health care providers from local health services; whereas most informants who prefer to get treatment from a local drug store still had negative work behaviours towards using a mask. To manage respiratory problems, seeing folk healers is not widely practised. However, these informants still worked with incorrect postures whether they take remedies from the local health service or private clinic or not. If they are admitted to hospital because of musculoskeletal issues, they have to receive health education to prevent musculoskeletal illness while staying in the in-patient unit or before discharge. For this reason, I would like to deal separately with limitation to access information with regard to respiratory problems and musculoskeletal problems to avoid confusion. Also, respiratory and musculoskeletal issues seem to be the most important health problems from these working conditions. The following details illustrate why the options to manage health problems influence preventive health behaviour to prevent the respiratory and musculoskeletal problems of second-hand clothing sellers.

With regard to the options to manage respiratory problems, most second-hand clothing sellers prefer to purchase medicines from a pharmacy or grocery store to manage respiratory problems or symptoms, such as allergic symptoms. The interview data illustrated that purchasing medicines from a drug store was widely practised among second-hand clothing sellers due to its convenience and effectiveness.

“It’s more convenient to buy medicines at the local drug stores [to release allergic symptoms] than getting a treatment in a hospital”

[Female, 39 years old, 10 years’ experience]

However, from observational and interview data, most informants who take this remedy still worked without using masks while exposed to dust, except when they have dust allergies as a health condition or they are encouraged to wear masks by others such as fellow second-hand clothing sellers, customers, family members or friends. The reason is because the role of drug store personnel focuses on dispensing medication; consequently, it is not surprising that why they did not make suggestions regarding occupational risk prevention and control as it is not their direct responsibility. This was explained by one informant, for instance, who actually buys medicines from her local pharmacy store to release her allergic symptoms.

“Actually, I bought medicines from local drug stores. I told drug store personnel about my symptoms. Then s/he gave me a medicine and suggested me how to use it” [Female, 38 years old, 15 years’ experience]

When I asked her a further question about suggestions from the drug store personnel, she stated that:

“The drug store personnel suggested me how to use the medicine. When I use it, I feel better. If I want to buy this medicine in the next time, just bring the pills to the drug store or tell them that I want to buy the pills for releasing allergic symptom. It’s not complicated and convenient for me.

[Female, 38 years old, 15 years’ experience]

The above statements reveal that prescribed medications are usually obtained from local drug store personnel. Consistent with the study of Boonphadh (2008) and Songwathana (1998), in Thailand, prescribed medications are usually available from drug store personnel. However, suggestions and encouragement by local drug store personnel to prevent work-related respiratory problems resulting from working conditions were not mentioned from the informants’ viewpoints in the present study.

With regard to the options to manage musculoskeletal problems, as with the option to manage respiratory problems, most second-hand clothing sellers prefer to purchase medicines from a drug store to manage musculoskeletal issues. However, suggestions by local drug store personnel to prevent musculoskeletal problems arising from their

working conditions were also not mentioned to the informants. Also, some informants suffering muscle pain sought ways to release the pain by receiving treatment from a local folk massager. Because of the convenience and effectiveness of the treatment from a traditional folk healer, combined with the cultural values of second-hand clothing sellers and their family members, some sellers preferred to receive the initial treatments from local folk remedies as the first option. However, most second-hand clothing sellers were not advised on how to work with the correct postures by any of the options presented above. Many statements from the interview transcripts show that, even though the sellers have to pay money for massages, many of them still prefer to use this option to manage their musculoskeletal problems. Also, convenience and effectiveness are the main reasons for using this option.

“When I had this problem [back pain], I then had a massage with a massager in my village and paid a small amount of money for him. After I had a massage, I felt better and getting well soon” [Female, 38 years old, 15 years’ experience]

While cultural values were mentioned by a few informants as one of the reasons for using folk remedies.

“I and my family have used traditional healers since my ancestry, I think it’s like a culture” [Female, 33 years old, 8 years’ experience]

The previous excerpts illustrate the linkage between the characteristics of the second-hand clothes selling community and its readiness for information sharing and exchange. Most second-hand clothing sellers were raised in rural areas located in the three southern border provinces of Thailand where using folk healers is common practice; it is part of the community as a primary source of health care for local people. Consequently, receiving treatment from folk healers (*mhor baan*) is widely practised not only among second-hand clothing sellers in the Deep South but also among Thai people in all regions of Thailand. The relevant studies indicate that even though modern medicine has played an important role in recent decades, traditional healers or folk healers have never disappeared from Thai society and can be found in all regions of Thailand, particularly in rural areas (Sermsri, 1989; Suwankhong et al., 2011). This option has played an important role in expanding health care provision

because folk healing uses a holistic approach and acknowledges traditional practices that suit people's lifestyles and needs (Kurian, 2012; Merriman & Harding, 2010; Suwankhong et al., 2011). Suwankhong et al. (2011), studying the existing roles of traditional healers in southern Thailand, mentioned that traditional healers in Southern Thailand are concerned about their patients as a whole by using a range of strategies including religious ceremonies or ceremonial options for helping the patients because the healers believe that health problems are both biological and supernatural in origin. Also, they do not consider that body and mind act independently. The Bureau of Indigenous Thai Medicine (2003) and Del Casino (2004) support the view that the folk healers' approaches focusing on mind and body meet clients' needs in a way that modern medical practices do not.

According to receiving treatment from a folk healer, the folk healer is the type of popular treatment broadly regarded by the second-hand clothing sellers in this study as offering effective ways to relieve their illness. With regard to work-related health problems arising from working conditions, the musculoskeletal problem is the only one that informants prefer to get the treatment from a folk healer or folk massager. The folk healer who also works as a massager perceives him- or herself or is recognised by clients, as a professional/trained massager. However, the training is not obtained from any formal institute, but is passed on from one generation to another, within a family or community (Boonphadh, 2008). Moreover, most of them accepted the role of the traditional healer because they were influenced by their ancestors, even though a few also felt it is due to individual interests and a desire to help ill people (Suwankhong et al., 2011).



Figure 66 The folk healer massaging a patient with musculoskeletal problems (Maneewat, 2016)

Although Helman (2007) illustrated that traditional practitioners not only focus on treating patients' symptoms or physical illness but also use methods designed to eliminate the causes of health problems at their roots, the findings in the present study reveal that getting treatment from a folk healer to release musculoskeletal problems focuses on the treatment rather than risk prevention or preventive health behaviour. However, the informants did not mention the reasons why the folk healers or even health providers did not pay much attention to the causes of musculoskeletal problems and especially about working postures. Perhaps this is because of the limited knowledge of folk healers or even health personnel regarding ergonomic postures. As Nelson (2005) mentioned, the knowledge regarding occupational risk prevention and preventive health behaviour is specific; thus, providers who provide information about occupational health and safety need to be trained (Nelson, 2005). Even health personnel, in order to intervene, evaluate, and define the musculoskeletal risk factors of their clients, require extensive occupational health knowledge (Berthelette et al., 2012; Singh & Arora, 2010). Also, with regard to drug store personnel, because their role focuses on dispensing medication; for example, preparing, dispensing, prescribing and giving advice (Laxminarayan & Heymann, 2012; Ratanajamit & Chongsuvivatwong, 2001), occupational risk prevention and control is not their direct responsibility. These issues are associated with the health service systems to promote health for the informal sector because occupational safety and health activities are carried out by public health specialists, who work in local authorities and are responsible for occupational safety and health for workers, were focused on the formal (regulated) sector (Boonphadh, 2008; Lund, 2012). Consequently, many informal sectors were not provided with health education from public health specialists who confront worker's health at the workplace as well as identifying things in the work environment that are damaging to the workers' health, and be able to respond to it (Lund, 2012).

In conclusion, as informal workers, second-hand clothing sellers did not have the opportunity to received health education in the workplace due to lack of care available from health authorities combined with an inadequate experience themselves and receiving information or experience from other peers because of lack of social interaction in the community. Moreover, the options to manage health problems,

especially to manage musculoskeletal problems, did not focus on health risk and preventive health behaviour as these are not the providers' direct responsibility, especially drug store personnel and folk healers. While the health care providers who are responsible for providing occupational health education need to acquire specific knowledge regarding occupational health and safety and also, they have to be trained. These problems are complicated and linked to public health policy including the health service system and are presented in the following sections. The future direction recommended to solve these problems and for developing health promotion strategies for second-hand clothing sellers seems to be difficult to arrange so long as there are no authorities or health staff available to take direct responsibility for the sellers at their workplace. This is because civic agencies, such as health personnel, have a role to play in enhancing the social interaction of community members and their risk prevention. More details about this limitation are presented in section 7.2.4.1; Limitation of health authorities providing health services for the workers in the workplace.

7.2.4 Limitation from policy and the health service system

Regarding the situation of policy and health services for informal sectors in Thailand, there were no health care providers responsible directly for some informal sectors who have no permanent workplace or employer such as second-hand clothing sellers. The findings show that lack of support from local authorities, such as health care providers, due to the structure of the health service system, is explained as one of the main limitations to access information and knowledge of second-hand clothing sellers. No one from any of the health services visited the workers at their workplaces for health care services such as physical examination and providing health education. Consistent with the relevant studies, apart from community participation or social interaction amongst community members, social support, such as from civic agencies working in partnership with the community, plays an important role to prevent health threats in the community (Blazer, 1982; Paton et al., 2008). As Bandura (2004) indicated, the regulation of behaviour is not merely a personal matter. Some of the impediments affecting healthy living reside in the health-care systems rather than in situational or personal impediments. Also, to manage occupational health exposure with post-exposure prophylaxis, a responsive health system is required which incurs expenditure

(Prüss-Üstün et al., 2005). This section illustrates the health service system in Thailand, focusing on the impact of limitation of the health service system toward health information, knowledge and risk prevention and control of second-hand clothing sellers. The causes of limitation to access information of the sellers are linked to the weakness of the health service system. These are categorised into two aspects: no health authorities or health staff to take direct responsibility for second-hand clothing sellers at the workplace; and quality of local health services regarding occupational health information. The details of both aspects are as follows.

7.2.4.1 Limitation of health authorities providing health services for workers in the workplace

According to the occupational health system in Thailand, the Bureau of Occupational and Environmental Diseases under the control of the Thai Ministry of Public Health is the direct authority responsible for the occupational health of the labour force throughout the whole nation by working collaboratively with the other provincial offices under its administration (Boonphadh, 2008; Siriruttanapruk et al., 2009). With regard to the situation of occupational health services in Thailand, a limited number of health personnel and other resources, such as equipment, and poor co-operation with employers, still exist in the country (Kaewboonchoo et al., 2011; Nilvarangkul et al., 2016; Siriruttanapruk & Anantagulnathi, 2004). Even though the Bureau of Occupational and Environmental Diseases developed a model for Basic Occupational Health Services (BOHS) in 2007 to solve the occupational health problems in the country (Chancharoen et al., 2012; Siriruttanapruk et al., 2009), there is still no health authority to take direct responsibility for second-hand clothing sellers at the workplace. My interview data showed that many informants complained about the lack of health care providers visiting them at the workplace. Also, they expected to receive health services from the local authority as described by both short- and long-standing informants.

“No one [health care providers] has ever serviced us [second-hand clothing sellers] in this market since I have worked this job nearly 20 years, I do not know why. If I want to meet them, I have to meet them only at the local service

or hospital. However, I still expect them come to service us in the market”
[Male, 48 years old, 18 years’ experience]

“I personally think that it is right for us (second-hand clothing sellers) to receive the [occupational] health service at the workplace. It should be the responsibility of the health care providers from the local health office. If they come to visit and suggest us about our work, for example, telling us about how to prevent disease, it may be better. We are also the population of this country, so we deserve to have this kind of service”

[Male, 42 years old, 15-16 years’ experience]

The above excerpts mean that second-hand clothing sellers recognise their need to receive health services, such as health education or information from health care providers to prevent occupational health diseases in the workplace. Consequently, extensive health care needs should be considered by the authorities to promote the health of the workers.

As described in the previous sections, lack of social support, especially from health services, influences the personal health information and community risk perception of second-hand clothing sellers. Consistent with the study of Bangdiwala et al. (2010), one of the barriers to health education in developing countries is the lack of health services due to an inadequate number of available health personnel. Several findings reveal that the relationship between civic agencies, such as local service providers, and community members, influences the community members’ problem-solving competence. This is because the civic agencies play a role in the community’s risk perception and management by providing their community members with resources such as information, and also by empowering community members and influencing the community’s risk management (Paton et al., 2008; Speer & Peterson, 2000). Paton (2005) and Paton et al. (2008) mentioned that the quality of the relationship between community members and local government officers influences the members’ risk perception as well as making decisions about whether or not to prepare themselves for preventing exposure to risks or hazards. Finally, Manothum et al. (2013) concluded that to improve occupational health for the informal sector in Thailand, collaboration and interaction of the workers and their local government officials such as local health

personnel is required to seek a possible solution to the work-related health problem of the workers.

7.2.4.2 Limitations from quality and access to health services

Previously, inequitable access to health services was registered as one of the important factors affecting the quality of the health service in Thailand. Massive numbers of the informal sector, including their family members, were particularly deficient in accessibility to health services (Boonphadh, 2008; Pannarunothai et al., 2004). Being aware of the situation, the Thai government introduced the 30 baht Health Card or Universal Coverage Scheme (UCS) in 2002. The scheme has been implemented for Thai citizens to gain universal access to health care services (Damrongplasit & Melnick, 2009; Hughes & Leethongdee, 2007; Srithamrongsawat et al., 2010; Towse et al., 2004). During the years 2002-2009, over 70 per cent of the Thai population were covered by the 30 baht Health Card. However, during this period, they were required to pay 30 baht (GBP£0.60) per visit or admission except for the elderly, 60 years and over, and children under 12 years (Hughes & Leethongdee, 2007; Towse et al., 2004). In 2009, the name 30 baht Health Card was cancelled and changed to the “Gold card” and people under the scheme were not required to pay 30 baht. It means that patients can now access the local health service free of charge. The Gold card is reported to be the major public health security held by the second-hand clothing sellers, but only used if essential.

Even though second-hand clothing sellers have the UCS and can access the local health service free of charge, they prefer to receive treatment from other options, purchasing medicines from a pharmacy or grocery stores and using folk remedies especially massage, to manage their health problems. Despite the fact that they have to spend money on these options, they prefer to receive the treatment from these other options as mentioned earlier rather than receive treatment from a government health institute. I noted that the government health service was found to be unpopular among second-hand clothing sellers in different ways. Most of them interviewed were sceptical about the quality of care due to the patient load, such as long waiting times, convenience and quality of care as explained by an informant of 13 years' experience.

“Going to receive a service from a government health institute is time consuming, as you have to wait too long. Although it is free of charge, but I prefer to receive the treatment from private clinic because receiving the treatment from the government hospital is really inconvenient”

[Female, 38 years old, 13 years’ experience]

Consistent with the study of Boonphadh (2008), availability and convenience do influence the decisions of workers on choices of health care services including remedies, medicines, and health practices in order to enable them to keep on working. Also, some findings illustrate that the long queue of clients at public facilities still remains since the overall in-patient and outpatient services among UCS members increased steadily from 2003 to 2011 (Hanvoravongchai, 2013; National Health Security Office, 2012). The relevant studies indicate that although Thailand’s UCS reforms have admittedly made notable achievements and showed significant advances in improving health care access (Hanvoravongchai, 2013; Li et al., 2011), criticisms have remained that the expensive funding mechanism failed to address the problems of inequitable distribution of personnel and facilities as intended, leading to the persistence of regional disparities in the provision of health care and a continuing shortage of health professionals in rural areas. Also, there has been media criticism of the decreasing quality of care. Therefore, it has been argued that although Thailand may have universalised low-cost health care, it has not yet universalised best care (Hughes et al., 2010; Li et al., 2011). Moreover, some researchers still questioned the quality of the health service system in Thailand. For example, Damrongplait and Melnick (2009) mentioned that regarding health service issues, quality, satisfaction, waiting times, and long-term sustainability are crucial dimensions of performance that need to be explored.

In conclusion, it is essential for the health authorities at all levels to acknowledge the limitation of the health service system. No direct authority and quality of health care services, is the most influential factor affecting the access of information regarding work-related health problems of the workers. Also, this limitation has affected the plans and strategies to promote health to second-hand clothing sellers. As long as there are no authorities or health staff to take direct responsibility for the sellers at their workplace, the future direction recommended for health promotion strategies for

second-hand clothing sellers seems to be difficult to arrange. Given this, the second-hand clothing sellers are left to cope with their own health situation based on their limited information and knowledge of work-related health problems influencing their health beliefs and so, negative working behaviour is still occurring. To deal with the problems, positive action by health authorities, policy makers, practitioners and second-hand clothing sellers who are directly affected by the situation, is required. Finally, the overall picture in this chapter illustrates that the individual experience, interpersonal and media communication for information sharing, social interaction as well as health service system and many more, all have potential to promote health for second-hand clothing sellers in Southern Thailand.

7.3 Summary

In this chapter, I consider the cause underpinning the inadequate health beliefs and negative work behaviour; this is necessary before developing a strategy to promote health for second-hand clothing sellers. When thoroughly reviewing the findings from the previous chapters, I found that limitation to access the information and knowledge of second-hand clothing sellers is associated with the study findings in the previous chapters including interview transcripts and observational data. All the collected data combined with the relevant literature indicates that several factors are associated with this limitation: these consist of limitation of individual experience; community context; and health service system. Surprisingly, lack of social interaction is a situation that I never expected and it seems to be important because the lack of health beliefs of second-hand clothing sellers is due to the lack of interpersonal information sharing. Finally, lack of health authorities and the health service system are the biggest cause underpinning this situation.

Chapter 8: Contributions and future directions

8.1 Introduction

In this chapter, I provide an overview of the key findings, the significance of the study and draw conclusions regarding the value of using an ethnographic approach within the context of the HBM. New directions for research and health promotion strategy and my conclusion about my theoretical contribution are offered.

8.2 Overview of the value of the study

This study was designed to explore in-depth the understanding of second-hand clothing sellers' beliefs about the occupational health risk and risk prevention and to examine how such understandings may have a role in directions for any preventive health behaviours. HBM focusing on health beliefs including preventive health behaviour was adopted as a theoretical framework to guide the assimilation of existing evidence and to frame the qualitative ethnographic study. The present study was proposed to answer the four principal research questions from the perspectives of second-hand clothing sellers. The four questions are, first, what are the second-hand clothing sellers' beliefs regarding the occupational risks or risk prevention? Second, what are the preventive health behaviours of the second-hand clothing sellers? Third, what is the relationship between the second-hand clothing sellers' beliefs and their preventive health behaviours? And forth, what are the implications for health promotion strategies for second-hand clothing sellers?

Ethnographic research methods, underpinned by an interpretative paradigm, were applied to obtain rich, culturally embedded information. Participant observation along with note-taking and photographs as well as ethnographic interviews were contemporaneously conducted over a six months period in Yala province, a district located in the southern border province of Thailand. Throughout the big four second-hand clothing markets located in Mueang district, Yala province, the findings are sourced from 27 informants who were willing to participate in the study. During the period of data collection, I collected 34 tape-recorded interviews, each lasting approximately 36 minutes to a little over an hour. The informants were recruited

based on three sampling methods, namely, purposive, snowball and opportunistic. The potential informants for participant observation and interviews were second-hand clothing sellers aged 18-60 due to the working age and maturity who have been working as second-hand clothing sellers at least 6 months because of defining as a permanent job and were willing to share their time, experiences, and knowledge. In this way the study aimed to vary the sample and also to gather insights from more than one market setting with an overarching aim to gain in-depth insights about occupational health behaviour.

Guided by the four research questions, four conclusions are drawn from this study; **firstly**, with regard to second-hand clothing sellers' beliefs on occupational health risks and risk prevention, the findings, not surprisingly, suggest that, participants who receive information and knowledge, through direct and indirect experience regarding the potential health concerns from their working conditions will have the higher perception of beliefs. Experience of working in the market and experience of health problems either directly or vicariously emerged as an important finding. **Secondly**, preventive health behaviour of second-hand clothing sellers, most participants did not have any concern about work-related issues unless firstly; physical problems were manifest and threaten their routine of daily life including ability to further the job and secondly; they have agreed to change work behaviour, for instance, using a mask after they were encouraged or suggested from others whom they credit and trust such as health care providers as well as family members, and potentially through media such as newspapers and magazines. For these reasons, clothes sellers have made a decision to change their work behaviour and that on the whole risk is minimised. However, it is clear that ability to continue to work is a major feature of behavioural change.

Thirdly, the relationship between second-hand clothing sellers' beliefs and their preventive health behaviour: Cues to action is one of the most important components of HBM influencing positive work behaviours of second-hand clothing sellers in this sample. An ethnographic approach facilitated exploration of specific cues to action present in the context of work in the clothes sellers' market. Also, cues to action serve to shape knowledge about work-related health problems of individual, through information or suggestions from others as well as personal experience as symptoms, and knowledge influences to the other components of HBM, as indicated extensively

in the literature. While perceived barriers influence negative work behaviours directly, moreover, when second-hand clothing sellers experience a high emotional response, for example, fear due to the high risk perception, and this is combined with high confidence or intention to perform positive work behaviours, behaviour change of individual will likely occur. These findings reflect the evidence from the HBM research studies, including evidence from both qualitative and quantitative approaches, in relation to occupational health area. However the ethnographic approach of the present study affords opportunity to explore the nature of perceived threats, barriers, intentions and what leads to behaviour change or not in *the context of the everyday work* of the sellers in the market context. And, finally, **fourthly**, conclusions concerning the implication for health promotion strategies for second-hand clothing sellers, promoting knowledge and beliefs including self-efficacy are considered as these components within a community context are highly relevant to positive work behaviours of second-hand clothing sellers and directly point to directions for health promotion strategy in southern part of Thailand.

Finally, in relation to the use of the HBM, the most significant findings of the present study are as follows:

- Cues to action which produce information and knowledge are the most important component influencing the other components of HBM according to findings from this market context.
- It seems that personal indirect experience is highly impactful for behaviour change and is most important for health promotion strategy for second-hand clothing sellers.
- Perceived barriers (especially discomfort for using personal protective equipment) was the most important component affecting negative working behaviours of second-hand clothing sellers.
- Limitations to access to information and context specific knowledge of second-hand clothing sellers is considered the most influential cause underpinning the occurrence of inadequate health beliefs and observations of negative work behaviour of second-hand clothing sellers.
- While the findings may not be surprising, they do add to further insight about the application of the HBM to this unregulated work context, and furthermore provide indicative directions for informing health promotion strategy that is

tailored to the context of the market.

8.3 Strengths and limitations of the study

8.3.1 Strengths of the study

During the period of my PhD research, I have thought about my own impact on the study and the authenticity/rigour of my work. The use of ethnographic research as methodology and open ended data collection methods were appropriate for the present study because this could bring together different data sources, highlight the differences between what I saw during observation and what I was told in interviews, as well as the steps of the data analysis complement each other, contributing to the trustworthiness and comprehensiveness of the study findings. Being in the field I held the role of observer-as-participant which my identity was more overt and in this observer as participant role became known to the informants. During the process of data collection, I was able to observe and participate in the informants' activities especially in the routines of typical working days of the informants, and could observe their work behaviour and other events regarding the study interests first hand. I then recorded what I observed in the fieldnotes, in as much detail as possible. At the end of the fieldwork, I was able to use the HBM as a background perspective to help me see significant features of the findings and I was able to make use of repeated visits, my interview was cyclic—undertook interviews as I was doing observation—and, also, the interview questions were designed to be relevant to my observation data.

Application of the HBM as a theoretical framework was valuable as it is a useful framework for investigating antecedents of health beliefs and behaviours and to my knowledge has not been applied in this context before. The HBM facilitated exploration to gain insights of many varied factors that influence occupational behaviours that can be applied to the market setting. I may not have been able to access these successfully if I had just undertaken open ended interviews and observation without any theoretical sensitisation. Also, HBM is useful in combination with other models and frameworks because such combination offers flexibility that makes the HBM adaptable and applicable to many health behaviours and varied population groups (Armitage & Conner, 2000; Mikhail, 1981; Orji et al., 2012;

Sheeran & Abraham, 1996). In the present study, HBM constructs have been considered alongside self-efficacy (Bandura, 1997) to enhance beliefs in the developing strategy to increase perceived self-efficacy of second-hand clothing sellers because Bandura's self-efficacy is proposed to enhance self-efficacy perception and adopted as a strategy for enhancing beliefs in self-efficacy (Ashford et al., 2010; Hurley & Shea, 1992; Kadden & Litt, 2011; Liu, 2012).

Furthermore, only five studies regarding applications of the principles of the HBM combined with an ethnographic methodology were found (Asakitikpi, 2008; Kleier, 2004; Snipes et al., 2009; Thomlinson et al., 2004; Wilkinson & Callister, 2010). These studies show that the ethnographic approach adds to evidence about the HBM to develop and implement a comprehensive strategy for assessing the beliefs or perceptions of health risk or illness of informants. Among these studies, there are only two studies (Snipes et al., 2009; Thomlinson et al., 2004) that offer explanation about the preventive health behaviour of informants and how the informants interpret their beliefs through experiences and make decisions that influence their behaviour within the everyday context. Considering the strengths and weaknesses of the relevant literature benefits the present study, in addition as the present study describes all principal components of HBM, preventive health behaviour as well as the relationship between the health beliefs and preventive health behaviour in an ethnographic stance, this offers new insights and can point to health promotion strategies that are embedded in the market context.

Using a qualitative approach has many advantages to the present study because a qualitative approach is appropriate to focus on the individual and socio-cultural context in which the study takes place more than a quantitative approach (Hoepfl, 1997; Yilmaz, 2013). Also, qualitative research allows researchers to gather large amounts of in-depth information on the construct that could not be gathered otherwise with quantitative study or close-ended survey instruments (Patel et al., 2001). As well, this method intends to enhance the informants to freely express their feelings and exchange their experiences and ideas on the studied subject (Efsthathiou et al., 2011; Patel et al., 2001; Snipes et al., 2009).

Carrying out the study in the southern part of Thailand is advantageous because I am a southerner, fluent in the southern dialect, and understand the regional language. Speaking the local language is fundamental for the data collection process and embedding me in the world of the clothes sellers, not only increasing the ability to understand the informants' conversation and establishing the relationship or building rapport between me and the informants, but also increasing the ability to understand informants' perceptions, attitudes and knowledge. As Mokibelo and Seru (2016) suggested, for people using specific regional dialects to meaningfully and intelligently generate knowledge about disease prevention, campaign messages have to be written and verbally communicated in their specific local languages because people's perceptions, attitudes and knowledge about disease messages are directly influenced by their cultural traditions and orientations, and can only be observed through their communicative actions (Mokibelo & Seru, 2016). Also, several studies indicated that a "socio-cultural approach", presenting health information messages in the context of the social and/or cultural characteristics of the target population, is fundamental to enhance health communication effectiveness (Kreuter et al., 2003; Kreuter & McClure, 2004; Lloyd et al., 2013; Peltokorpi, 2006).

Finally, because ethnographic analysis, introduced by Spradley (1980), combining with interview and observational data illustrate the themes of each constructs coupled with the statements from Eisenhardt (1989), qualitative data are beneficial for researchers to understand the theory or rationale underlying relationships presented in the quantitative data or may suggest directly theory which can then be strengthened by quantitative support, the findings of the present study is the only one study regarding HBM and occupational health-qualitative study that explains the relationships between HBM constructs by using ethnographic analysis to analyse thoroughly in-depth data from interview transcripts and sets this against a backdrop of detailed observation. Also, these relationships, while emerging from a qualitative study, were supported by many relevant quantitative studies found in the literature, although occupational behaviour in unregulated settings is sparsely studied so far. Consequently, this present study is an important addition to the literature especially the literature regarding HBM and use of qualitative study, and in the context of the market.

8.3.2 Limitations of the study

Firstly, limitations of the literature concerning occupational safety and health of second-hand clothing sellers - through the reviewing process, I recognised the limited availability of relevant documents and studies on occupational health situation of second-hand clothing sellers in Thailand or even around the world. For this reason, the reviews in this study were relevant to the probability of work-related health problems/diseases among various kinds of workers exposed to the similar working conditions and environment as same as the second-hand clothing sellers, e.g., labourers working in the clothing and textile business sectors such as weaving, garment and clothing or textile industries. Second, I noticed the importance of searching for the views of other parties, for example, staff of District and Regional Health Offices. However, because there are no health care providers that respond directly to second-hand clothing sellers, the study limited the opportunity for the staff of the offices to express their perspectives on the occupational health services provided to the sellers. This is an area that could be followed up in future research.

And lastly, as the fields of study were the second-hand clothing markets and the second-hand clothing sellers' houses, my previous plan, before having data collection, was to be in the markets and their houses in order to observe their preventive health behaviours. However, because many informants lived far away from Mueang district, Yala province—a study setting, also, some participants did the process of separating clothes at night. For these reasons, I missed the opportunity to observe many informants, for the step of separating clothes and moving clothing bales, in their houses due to the safety reason. These steps are really important as the informants may be exposed to many health threats, such as clothing dust, incorrect working postures. Because of these limitations, I did the ethnographic observation at only five informants' homes, while nine informants did these steps in the markets. It means that nearly fifty per cent of informants were not being observed at their homes. Consequently, the observational data regarding preventive health behaviour was gathered mostly during the time in the markets. Further research about home based working is needed.

Being in the market and understanding “on the ground” the life of the clothes sellers was important and better than just asking questions developed from ideas from the literature and using interviews alone. This is because observation in the setting provides knowledge of the context in which events occur, and may enable the researcher to see things that informants themselves are not aware of, or that they are unwilling to talk about (Patton, 1990). Furthermore, the study could have been improved by taking findings back to the informants and asking them to give me a feedback on whether the health promotion strategy indicated as needed by the findings of the present study was feasible or acceptable.

8.4 Implications for practice and research

The implications and future directions suggested by results of the present study can be categorised into two different aspects, implications for practice and implications for future research.

8.4.1 Implications for practice

Because of the adoption of ethnographic methods, the findings of the present study illustrate the depth and detail of the social context of second-hand clothing sellers and the market place. Thus health promotion strategy recommended as a result of the findings of the present study is based on the background of HBM underpinning the market context, and for example, specifically cues to action and the need for access to knowledge are of importance. For this reason, theoretical work to underpin community participation approaches in health promotion or “community-oriented strategies” can be applied to the seconds-hand clothing market context.

According to community-oriented strategies, the strategies are designed to capture “community concerns and practices” based on community background, beliefs and expectations. Also, the future health promotion strategies based on community orientation could be considered to apply appropriately by concerning lifestyles and traditional behaviour of people in a community (Chopra et al., 2002). Consequently, the direction needed regarding future health promotion strategies to promote healthy workplace for second-hand clothing sellers’ community is shaped from the findings

concerning the workers' social context of market place and the sellers' everyday life. As presented in chapter 6, the implication of the study findings for practice are divided into four categories; implication for health promotion strategy in the workplace, implication for information sharing in the market place, enhancing community participation, and Implication for health service system.

8.4.1.1 Implication for health promotion strategy in the workplace

Providing information about health risk and risk prevention in the workplace is more appropriate than providing information at home or in the health services due to the working context of the sellers. This is because providing information in the workplace could be more credible information if the information is provided or exchanged from other sellers who are experienced. This mirrors the findings regarding information from other credible market workers. Also, health professionals could become more familiar with the local context of second-hand clothing sellers including their work environment to provide tailored information under the context of clients. Moreover, the workplace is an ideal setting for work-related health promotion activities not only because workers spend much of their time there, but also because they benefit from having healthy workplace and preventing themselves from work-related diseases (Meershoek & Horstman, 2016).

8.4.1.2 Implication for information sharing in the market place

Health information through interpersonal information sharing by face-to-face communication is considered to be the easiest way to enhance positive work behaviour for the sellers by providing or sharing information and knowledge about work-related health problem between friends, customers, family members or between health professional in health care services and the workers. The method is considered to be more applicable to second-hand clothing sellers than other forms of communication. Although mass media influence in the market was not strong, as might be anticipated from existing literature, due to limited opportunities to access the mass media of the workers, providing bespoke printed media along with face-to-face communication may be more helpful than face-to-face communication alone. A combination between interpersonal and mass media communication was more effective than applying either

alone (Morton & Duck, 2001) in previous studies. Also, considering sociocultural context of workers and their community is necessary to provide an appropriate interpersonal communication to the workers from different backgrounds, for example, considering appropriate time to provide information for the sellers and communication with workers speaking local language (Arvey & Fernandez, 2012). Moreover, the kind of information, individual who shares and who receives information and what is shared also matters to information sharing. These are also useful for the future plan for health promotion strategy for health authorities, at least in the provincial level, as this may point to the kinds of information sharing that will work for health promotion for second-hand clothing sellers.

8.4.1.3 Enhancing community participation

The findings show the linkage between lack of information from fellow second-hand clothing sellers who can share or exchange their experience about work-related health problems with other sellers and lack of social interaction of second-hand clothing sellers' community. There are several factors affecting the social interaction of the sellers consisting of the limited time spending in the markets, no active involvement of workers in the markets (as their community) and no leader or intermediary in the community, such as health workers or community leader. Therefore, enhancing more active involvement of second-hand clothing sellers' community could be considered as one of the strategies to promote health and wellness for second-hand clothing sellers. As Litt et al. (2011) revealed that community participation or involvement captures engagement in local activities (Litt et al., 2011). It is a strategy that provides people in the community with the senses that they can solve their problems through collective action and careful reflection. This strategy is likely to be important for how community responses to risk, as community risk perception, and links to the risk communication (Glik, 2007).

8.4.1.4 Implication for health service system

As the findings show that lack of health authorities and the health service systems are the biggest underpinning limitation to access information and knowledge of the sellers. Also, the future direction recommended for health promotion strategies for second-

hand clothing sellers seems to be difficult to arrange as long as there are no authorities or health staff to take direct responsibility for the sellers at their workplace. For these reasons, the Bureau of Occupational and Environmental health, Ministry of Public Health, responding occupational safety and health provided to Thailand's labour forces could consider regarding health service system for informal sectors, such as second-hand clothing sellers, as intensive efforts to promote the health services with local engagement at a local level by people from the market themselves, in a within community rather than a top down approach. Health authorities who have claimed to be concerned with informal workers' health could consider a community based potential approach to promote health for the workers. It is crucial to enable second-hand clothing sellers and their communities to recognise and demand for their own needs and rights, and to discontinue spontaneous acceptance of the situation that they encounter.

The result of the present study could be applied as information for the future health plans and strategies for second-hand clothing sellers or other informal workers who have their social context or workplace environment similar to the sellers, for example, informal workers without direct authorities. Providing information and knowledge including enhancing beliefs is basically needed for the strategy to improve working habits of the workers. Regarding providing information and knowledge, as a practice implication, it is crucial to consider how the information has to be specifically tailored for it to work and link to serious health problems and susceptibility in relation to working process of the sellers, the kinds of information sharing as well as the quality of information. Moreover, the results also benefit for health scholars who are concerned about informal workers' health and safety. They could also voluntarily cooperate with local health institutes and second-hand clothing sellers or other workers who work in the similar working process and environment in distribution of occupational health information to meet the needs of the workers.

8.4.2 Implication for future research

The relevant literature shows a lack of studies regarding HBM and occupational health-with sparsely of qualitative studies, thus there should be more qualitative work in occupational health using HBM. These could be used to better in-depth

understanding to describe health beliefs and preventive health behaviour of the workers in context by using qualitative approach. For example, using detailed observation to identify working habits of individuals is better than using only questionnaires because using questionnaires to measure personal risk behaviours might not accurately reflect the actual work behaviours of the workers (Pursley & Saunders, 2016).

The findings of the present study also show the linkage between limitation to access information and knowledge of second-hand clothing sellers and the relevant parties such as health authorities, folk healer and drugstore personnel. Further information from interviews about their viewpoints in relation to risk prevention and control of second-hand clothing sellers or other similar informal workers is beneficial to promote health for these sectors. The findings of the present study can be applied to conduct a future study by implementing health intervention programme as an action research for enhancing knowledge, beliefs and working habits of the workers. Also, because second-hand clothing markets are identified as the sellers' community, participation and action of community's members is important to promote health in the community. Thus, participatory action research (PAR) is considered valuable for the future research.

The nature of PAR differs from other studies because PAR is based on data collection, reflection and action of people in their community through their participations that aims to improve their own health (Buam et al., 2006). A PAR study in the clothes market might entail the empowerment between community members to take actions for their self-care. A collaborative pattern of working in which those who are affected by an issue participate in the research is beneficial to community's self-care of the workers because the participants can partake in effective action and contribute their ideas and in turn, they seek their way towards action (Koch & Kralik, 2009). The outcomes from PAR study would also help the facilitator to define the participants' concerns clearly. This approach could be applied for health service providers to improve their health service because their clients (second-hand clothing sellers and their community) come together to design and choose health services based on their needs. I hope that the future study will benefit to the sellers' community to enhance community's risk perception and induce preventive health behaviour appropriately

with the market context. At least, the community members would recognise about health concerns in relation to their working process and more familiar with the group conversation about work-related health problems.

In addition to PAR research, the theoretical contribution of the study supports the HBM because the findings of the present study deeply explain aspects of the workers' beliefs and their preventive health behaviour by describing each HBM component, the potential relationship between the components of health belief and work behaviour and the complexity of relationships between HBM constructs. The most important aspect in this present study concerns the results of complex and embedded relationships between HBM constructs influencing preventive health behaviour. Although there are no fixed rules of HBM that mention about the most significant construct of HBM influencing preventive health behaviour, one of the original research developers of HBM theory (Janz & Becker, 1984) and several studies (Champion et al., 2005; Kadden & Litt, 2011; Manfredi et al., 1977) indicated that belief in self-efficacy is the strongest correlation of the ability to perform preventive health behaviour. However, the results of the present study found that cues to action in this study that emerged from the ethnographic work is the most important component of HBM influencing preventive work behaviours in this particular setting. It seems that "the most important component" in this study does not mean the "the strongest correlation influencing preventive health behaviour" as usually emerged in quantitative study using statistic to analyse and evaluate, but rather what is seen as significantly important by the clothes sellers themselves.

According to the present study, cues to action is the most important components because both internal and external cues influence the other components of health beliefs including self-efficacy associated with positive or negative work behaviours. The findings show that knowledge arises from cues to action consisting of personal direct experience (i.e., symptom) and personal indirect experience (information from others or through media) influencing the other components of health beliefs influencing work behaviours of the sellers. These results are broadly consistent with many studies which supported that cues to action influence the other components of HBM (Atkinson & Permuth-Levine, 2009; Carpenter, 2005; Gerend & Shepherd, 2012; Morris et al., 2012; Shahrabani & Benzion, 2012). For example, Gerend and

Shepherd (2012) concluded that indeed, informants who were advised by a health care provider to receive the human papillomavirus vaccine reported greater perceived susceptibility to HPV infection, higher perceived benefits and lower perceived barriers to HPV vaccination, higher perceived self-efficacy, and more favourable subjective norms for receiving the vaccine.

All this can be set within a backdrop of the changing nature of approaches to health promotion. According to analyses of eras, or waves, “the wave of public health action”, the first four waves emerging to address public health issues in different time periods focus on: for example, the first wave focuses on civil engineering to improve public health, while the second wave focuses on germ theory of disease and prevention. The present study is consistent with the fourth wave of public health action which focuses on “risky behaviour” Hanlon et al. (2011) stated that “lifestyle issues” such as smoking, diet, physical activity, etc., become the cause of death and disability due to the impact of chronic diseases (Hanlon et al., 2011). Work style issues are allied to this wave, where a clothes selling has an impact on health and can lead to chronic conditions and also disability and death. The applied HBM work, with very many studies worldwide and in many diverse health risk fields, was undertaken in the fourth wave public health context. This is valuable to public health action as the HBM has been found to be a useful framework to describe the cause of illness and risky behaviour of many diverse target populations. However, as Hemmingway (2011) illustrates, that “human being” is what the first four waves of public health action seems to be missing. Hemmingway (2011) points to the emergent “the fifth wave” as a future direction of public health action which focuses on a more holistic view of “well-being”. This is relevant to the present study, as the present findings, while attending to risky behaviour also point to the need to understand the daily and socially embedded aspects of behaviour, and this complexity is resonant with the new fifth wave developments. The further direction of the fifth wave in public health is to promote well-being across communities and develop an understanding of the lived experience in that context and how changes can be made to achieve well-being. For this reason, it is timely for more community owned strategies to be developed. The findings of the present study illustrate everyday activity and life in the clothes selling market that point to the need for this fifth wave approach which considers the social fabric of everyday life and the details of daily living that health promotion strategy needs to

attend to. Moreover, the present study is important because by using ethnography the findings have revealed the kinds of specific details of life in the market that have to be worked with if health promotion is to be valuable, and also a community based and driven approach seems to be the direction to go. Therefore, the present findings are pointing to directions allied with current movement in public health that resonate with fifth wave approaches.

As the present study has taken forward my Master degree dissertation, which was quantitative in nature, this more extensive ethnographic study provides me with a deeper insight into the complexity of socio-cultural context of the sellers that I never gained from my previous quantitative studies. An open and highly contextualised approach is beneficial for the study because if researchers understand the context and culture in which the study takes place, they can locate the perceptions and actions of participants and grasp the meanings that they communicate (Holloway & Galvin, 2016) and this may be helpful to developing health promotion that is a good fit with the local context such as the market. The findings using ethnographic approach not only enable researcher to understand “what was happening” but also deeply understand cultural phenomena by using “how” and “why” for interpretation (Cowdell, 2009). This present study has helped me develop new understandings of why the clothes sellers do things as they do within what happens in the market. This kind of insight can add a new dimension to the literature, particularly in the context of under researched informal work in my country. Finally, I really hope that I will have opportunity to further the PAR research to build on my PhD thesis and to develop an initiative to cooperate with market community members and seek new ways together to improve community risk perception and health care among clothes sellers.

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Appendix 1

Ethics Approval



Ms Uraiwan Sirithammaphan
Faculty of Health & Social Care
University of Hull

**FACULTY OF HEALTH
AND SOCIAL CARE**
T: 01482 464680
E: j.dyson@hull.ac.uk

OUR REF: 163
18 November 2014

Dear Uraiwan

Re: Beliefs and behaviours for preventing occupational health problems among the second-hand clothing sellers in Southern Thailand

Thank you for your detailed responses to the Faculty Ethics Committee letter dated 29 October 2014.

Given the information you have provided, I am able to give Chair's approval for your study as per the Committee's Terms of Reference.

I wish you every success with your research.

Yours sincerely

Dr Judith Dyson
Chair, Research Ethics Committee

cc: file/supervisors

Appendix 2
Invitation Letter (for fieldwork supervisor)



Sirindhorn College of Public Health, Yala
91 Tesaban 1 Road
Sateng Mueang
Yala Thailand 95000

Faculty of Health and Social Care
T: 01482 463362
E: f.cowdell@hull.ac.uk

5 December 2014

Dear Director,

I am pleased to invite Dr Chompoonuch Supapwanich to be a fieldwork supervisor of our PhD student as follows:

Name: Mrs Uraiwan Sirithammaphan

Programme: PhD Nursing Studies

Topic: Beliefs and Behaviours for Preventing Occupational Health Problems among the Second-hand Clothing Sellers in Southern Thailand

Methodology: Ethnography

Supervisors: Dr Fiona Cowdell

: Professor Kathleen Galvin

The time period of data collection: 11 December 2014 – 9 June 2015

Yours sincerely

Dr Fiona Cowdell

Reader – Wellbeing in Long Term Conditions Research Group

Graduate Research Director

Appendix 3

An example of fieldnotes and field work

The second informant is a 33-year-old man. He is married. He graduated with a bachelor's degree. He sells the clothes alone at the "Night market" and the "Coconut market."

Experience of selling second-hand clothes: 1 year 2 months

Day 1: 16 Jan 15 (the first day)

I came to the "Night market" around 17.30 and waited for him around 5 minutes.

The conclusion of his working process consisted of

- 1. Buying goods from the wholesaler:** He often bought the goods from the wholesalers in Yala and sometimes in Pattani. For Pattani, he, sometimes, travelled to buy the goods with his pick-up truck at the house of one wholesaler which located in "Bangpoo", Pattani province, around 50 km from Muang district, Yala province.
- 2. Grading and grouping the quality of goods:** He did this process at his house in Tasab village, Yala, around 8 km from the centre of Yala.
- 3. Commuting from his house to the second-hand clothing markets:** He drove his pick-up truck from his house to the market and arrived to the stall around 17.30.
- 4. Preparing the second-hand clothing stalls:** He prepared his stall as follows:
 - He lifted the components of clothes hanger rails (not heavy, approx. 3 kg each) from his pick-up tray to the stall and then, assembled it by himself.
 - He moved the 5-6 storage bags (each bag was approx. 5-10 kg) from the pick-up tray to the stall's floor and opened it. Then, he picked the clothes with the clothes hangers from the five storage boxes (figure 1) in the pick-up tray and hung it. This process was around 30 minutes. I noted that he often bent down and looked up. His elbows did not position to right angles and his back was not straight when he picked the clothes from the storage bags for hanging (as figure 2). Also, he often had a repetitive arm and hand movement while hanging clothes around 20 minutes (figure 3) and stood on tiptoe to hang clothes on the high clothes rails, around 2 metres, (figure 4). Moreover, he did not wear a mask while he prepared the stall and did not

wash his hands when finished it. (Fieldwork: He did not use PPE to prevent dust, even though he knew he is exposed to dust) I helped him prepare the stall until it was finished around 18.10. Then he sat on the chair and waited for the customers.

5. **Selling clothes:** He started the sale around 18.00-18.30. It did not have a lot of customers at his stall. Most of them were adult women. He often changed his positions while selling clothes, sitting, standing and walking (Fieldwork: He often changed position because there were customers coming to the stalls and he felt more comfortable).
6. **Clearing the stalls:** He finished the sale around 20.00 and started to clear his stall. He picked, compiled and put the clothes in the storage bags and boxes. Then, he lifted and put the storage boxes and bags in the pick-up tray. I noted that he sometimes bent down and looked up when he lifted the storage bags from the floor to the pick-up tray but sometimes his elbows positioned to right angles. Moreover, for this process, he did not wear a mask (Fieldwork: He did not use PPE to prevent dust, even though he knew he is exposed to dust). I helped him clear the stall. It took time approximately 30 min. Then I went to the 1st participant's stall to interview him for the second time.
7. **Going back home:** He went back home around 20.30. It took time around 15 min for travelling.

I observed along with talking and helping him and sometimes, I walked to the near shop (for avoiding him to feel uncomfortable), but still observe him.

The location of his stall had the good ventilation. It didn't have a lot of dust. I felt comfortable. Until I sat near the clothes, I perceived the clothing smell, but it doesn't strong.

I think that his stall had a good air flow because it didn't have a roof-top tent. So, I felt that it had the good ventilation.



Figure 1 the storage boxes



Figure 2 He worked with an awkward posture



Figure 3 the high clothes rails

Day 1: 16 Jan 15 (the first day at the coconut market)

I arrived to the ‘Coconut market’ around 08.30 and waited for him around 10-15 minutes. The conclusion of his working process consisted of

- 1. Commuting from his house to the second-hand clothing markets:** He drove his pick-up truck from his house to the market and arrived to the stall around 08.45 (figure 5). He wore the long sleeves, long pants and canvas leather shoes.
- 2. Preparing the second-hand clothing stalls:** He prepared the stall by
 - Hammering and stabbing the iron stakes pass through the ground. Then he spliced the parasols or market umbrellas with the iron stakes and tied the parasols with the rubber ropes (figure 6). After that, he raised the parasols before preparing the clothes hanger rails. I saw he did not wear the gloves while he contacted the iron stakes and umbrella (Fieldwork: He did not use PPE to prevent sharp injury, even though he knew that some parts of iron stake and market umbrella are sharp). Also, his back was not straight and his elbows did not position to right angles (90 degree) while he spliced the parasols with the iron stakes (figure 7) or when he tied the parasols with the rubber ropes (figure 8). Furthermore, he sometimes stood on tiptoe when he was raising the parasols (figure 9).

- After finishing the above process, He lifted the components of clothes hanger rails (not heavy, approx. 3 kg each) from his pick-up tray to the stall and then, assembled it by himself.
 - He moved the 5-6 storage bags (each bag was approx. 5-10 kg) (Fieldwork: the weight is not too heavy for lifting) from the pick-up tray to the stall's floor and opened it (figure 10-11). I noted that his back was not straight while he was opening the storage bags (figure 11).
 - Then, he picked the clothes with the clothes hangers from the five storage boxes in the pick-up tray and hung it. I noted that when he picked the clothes from the storage bags for hanging, he often bent down and looked up. His elbows did not position to right angles and his back was not straight. Also, he often had a repetitive arm and hand movement while hanging clothes (around 20 minutes) and stood on tiptoe to hang clothes on the parasol stems, around 2 metres, (figure 12). Moreover, he did not wear a mask while he prepared the stall and did not wash his hands when finished it. I helped him prepare the stall until it was finished around 09.30. Then he sat on the chair and waited for the customers.
3. **Selling clothes:** He started the sale around 09.30. During the sale, he often changed his positions while selling clothes, sitting, standing and walking.
 4. **Clearing the stalls:** He finished the sale around 13.30 and started to clear his stall. I helped him clear the stall which it took time approximately 45 min. I saw he didn't wear the sunglasses when he exposed to the strong sunlight (Fieldwork: He did not use PPE to prevent sunlight, even though he knew he is exposed to sunlight as the weather was really hot, nearly 40 degree Celsius). He picked, compiled and put the clothes in the storage bags and boxes. Then, he lifted and put the storage boxes and bags in the pick-up tray. I noted that he sometimes bent down and looked up when he lifted the storage bags from the floor to the pick-up tray and sometimes his back was not straight. Moreover, for this process, he did not use the PPE like mask when he exposed to the clothes dust as well as the sunglasses and hat when he exposed to the strong sunlight (figure 14).

When he finished clearing the storage boxes and bags, he tied the parasols (figure 13), untied the rubber wrapped the iron stakes and parasols. After that, he pulled

the parasols out from the ground as well as iron stakes, respectively. Then, he lifted and put the parasols in the pick-up tray. This process, he sometimes worked with an awkward posture as in the figure 14.

5. Going back home: He went back home around 14.00. It took time around 20 min for travelling from the market to his house.

I observed along with talking and helping him and sometimes, I walked to the near shop (for avoiding him to feel uncomfortable), but still observe him.

The location of his stall had the moderate ventilation, sometimes I feel it had a good air flow, sometimes, I didn't. It didn't have a lot of dust in the air. I feel comfortable when I sit outside the stall but if I stood in the stall or under the parasol I didn't like it because I perceived the clothing smell. Also, I think his stall was quite dark because it was near the bridge and the clothes were hung at the parasol stems.

I saw the rash from contact dermatitis on his arms (figure 15). He told me he opened the clothing sack and separated the clothes for sale at night. He had the itchiness especially when he was grading clothes and it was better when he had the shower. Normally, he looked strong and healthy.



Figure 4 he spliced the umbrella with the iron stakes with the awkward posture.



Figure 5 He showed me he had a rash after separating the clothes from the clothing sack

Day 3: 22/1/15 and Day 4: 23/1/15

On the 22nd and 23rd of January were the last two days of the 2nd participant observation at the “Coconut market” and the “Night market”. His routine of working day as well as his behaviour was not different from the previous days. I ensured that I already observed all of the routine of his working day (in the market). Also, I didn't see the other new behaviours and I think the observational data collection was already saturated.

Appendix 4

Aide memoire

Example of questions from ethnographic interviews (Spradley, 1979) sensitised by HBM theory

Descriptive questions: Broad and general questions that allow informants to freely express their story

1. Could you please tell me the routine of your working day?
2. Could you describe a typical day at the market(s)/your house?
3. How do you feel when you move the pack of clothes?
4. How do the work activities influence your health (conditions)?
5. Could you tell me about your experiences about health problems/conditions?

Structural question: More specific questions to expand the information

1. Talking about lifting and moving the bales, you said you often have a back pain and muscle soreness. What is your experience and what would you do if you have those problems?"
2. You told me you have a herniated disc from heavy lifting, could you tell me how did you know about the disease?

Contrast question: Finding out how something can be different

1. Could you tell me the difference between when you used a mask and didn't use it?
2. Could you tell me the difference between separating clothes inside and outside house?

Appendix 5

Using the HBM to guide ethnographic analysis

The domains (or categories) that I noted during the data analysis are followed from the research questions and HBM as the theoretical framework, as follows:

Research question 1: What are the second-hand clothing sellers' beliefs regarding the occupational risks or risk prevention?

The domains of the 1st research question comprised:

X is the perceived susceptibility to the health risk (as analysed from transcriptions)

X is the perceived severity of the health risk (analysed from transcriptions)

X is the perceived benefit of occupational risk prevention (analysed from transcriptions)

X is the perceived barrier to occupational risk prevention (analysed from transcriptions)

X is the perceived self-efficacy of occupational risk prevention (analysed from transcriptions)

X is cue to action (preventive health behaviour)

Research question 2: What are the preventive health behaviours of the second-hand clothing sellers?

The domain of the 2nd research question was

X is the preventive health behaviour (analysed from transcriptions, fieldnotes and fieldwork personal journal)

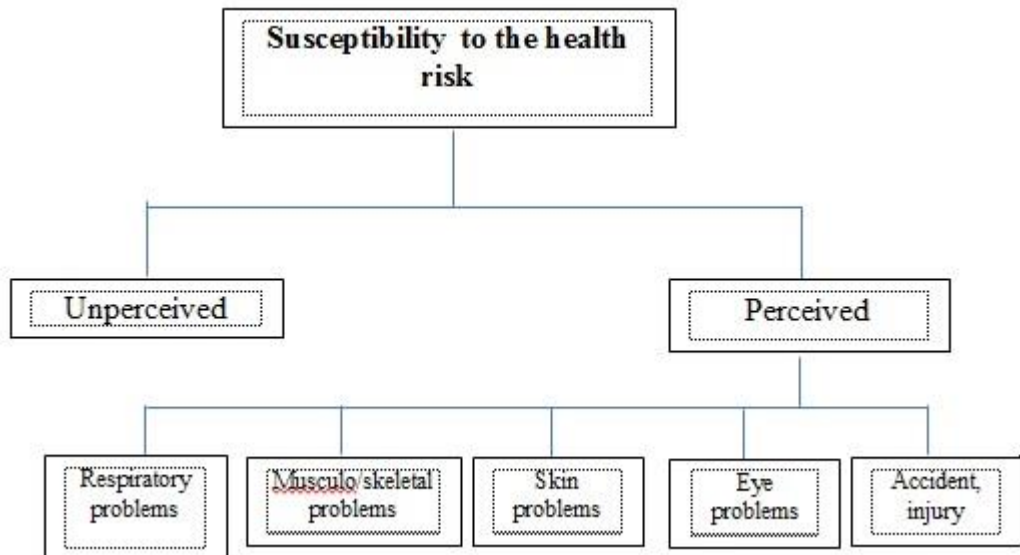
Research question 3: What is the relationship between the second-hand clothing sellers' beliefs and their preventive health behaviours?

X is the relationship between health beliefs (Domains 1-6) and health behaviours (Domain 7)

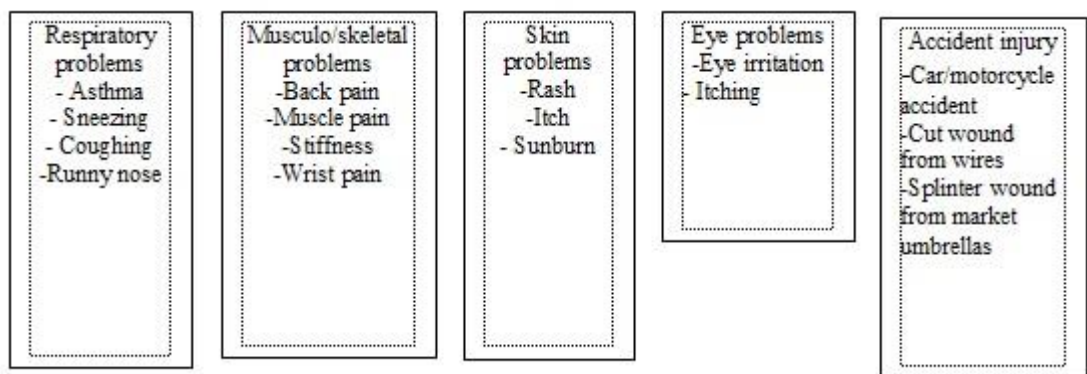
Then I used taxonomic analysis to regroup the included terms and examine if there were any further included terms I could identify. "Taxonomic analysis" was employed to expand my understanding of the domains.

Domain 1: Perceived susceptibility of the health risk

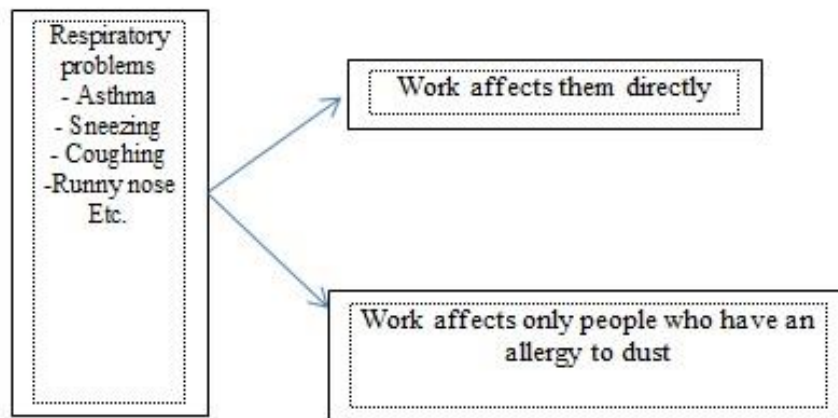
I adopted taxonomic analysis to regroup the domains into two main categories, unperceived and perceived, before I moved on to further analysis.



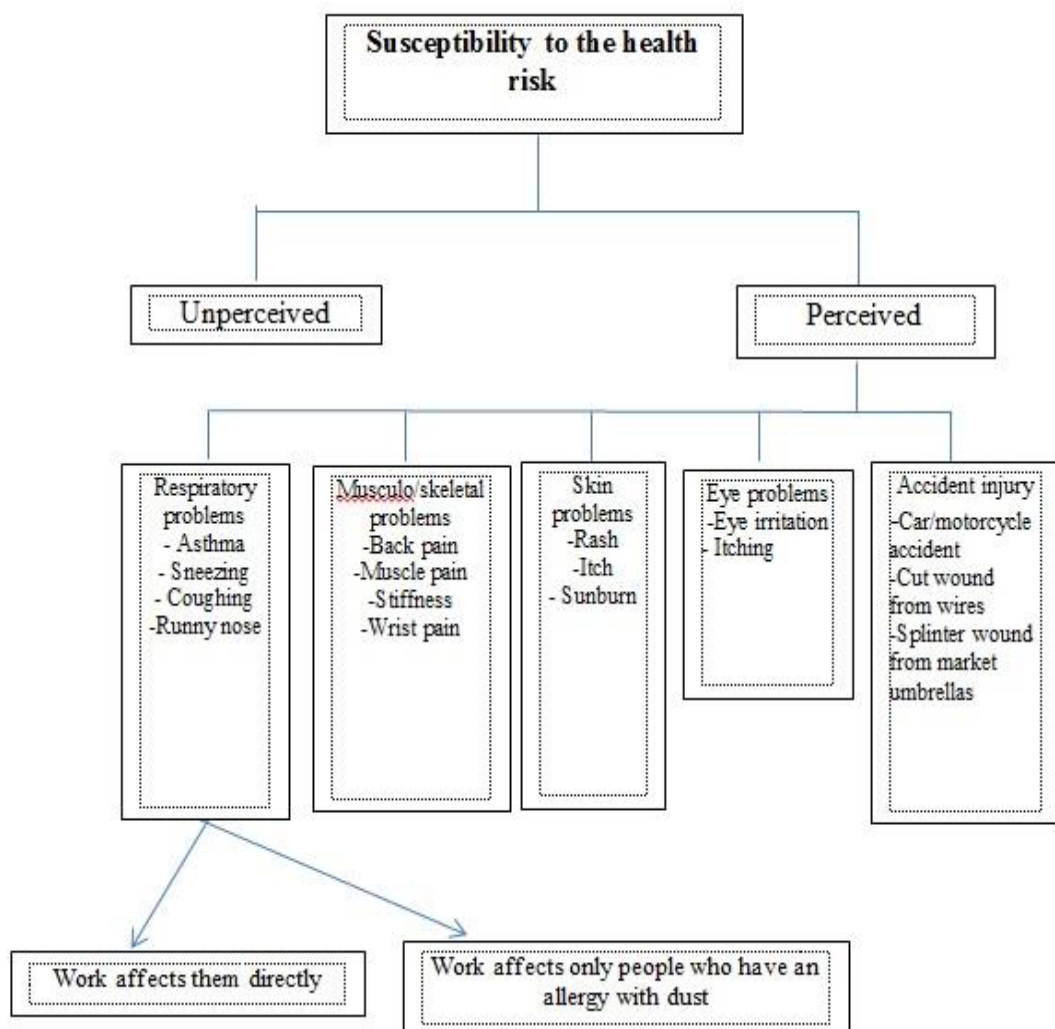
After I had repeatedly read through interview transcripts and the notes, I found additional included terms for each new cover term revealed. Under the included terms, the five health problems including injuries, for instance, respiratory problems, I added more included terms after repeatedly reading through my notes and interview transcripts.



Furthermore, according to the transcriptions, I found additional included terms for each new cover term revealed.



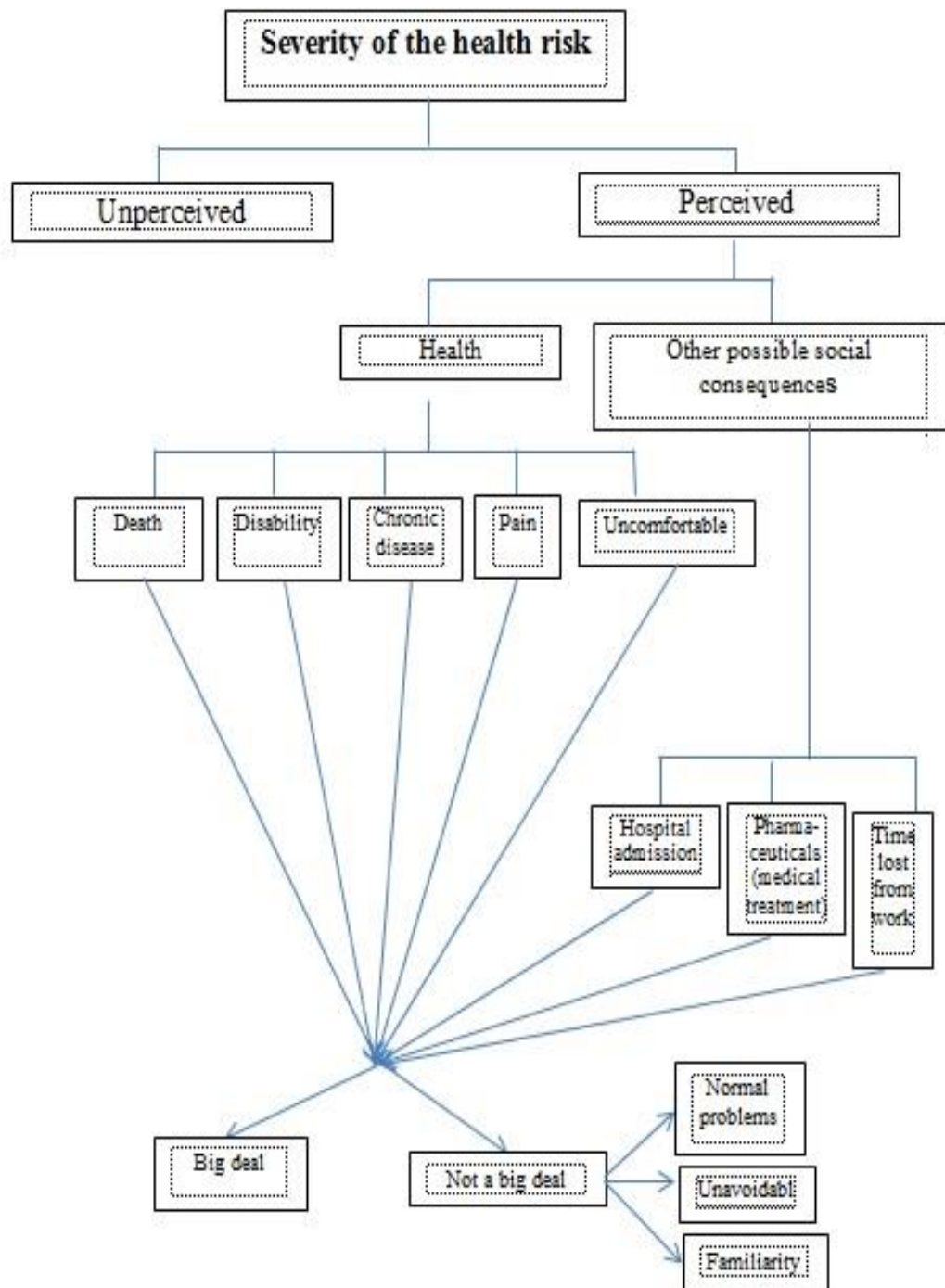
Finally, I had a complete draft for analysis as follow



Domain 2: Perceived severity of the health risk

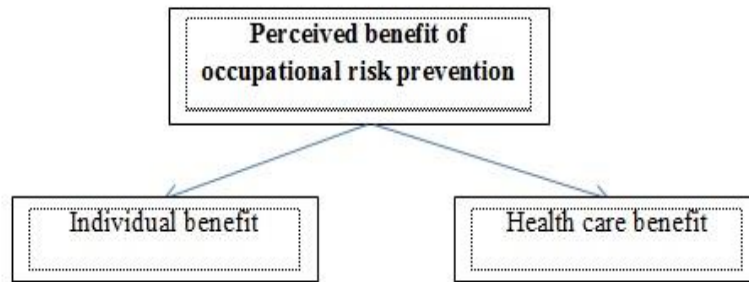
I adopted taxonomic analysis to regroup them into two main categories, unperceived and perceived and I also added more included terms after repeatedly

reading through my notes and interview transcripts as following:



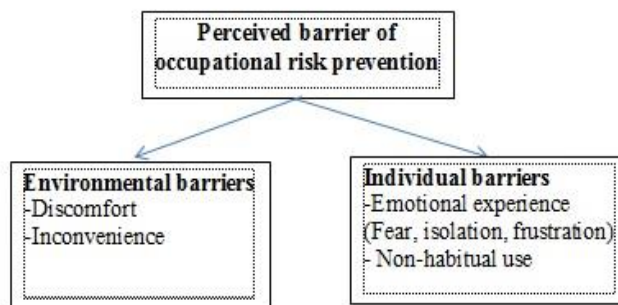
Domain 3: Perceived benefits of occupational risk prevention

I applied taxonomic analysis to regroup this domain into two main categories, individual benefit and health care benefit.



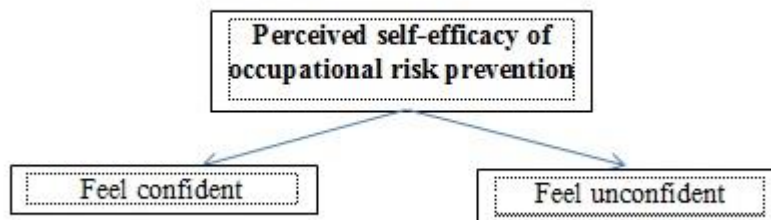
Domain 4: Perceived barriers of occupational risk prevention

I applied taxonomic analysis to regroup them into two main categories, environmental barriers and individual barriers.



Domain 5: Perceived self-efficacy of occupational risk prevention

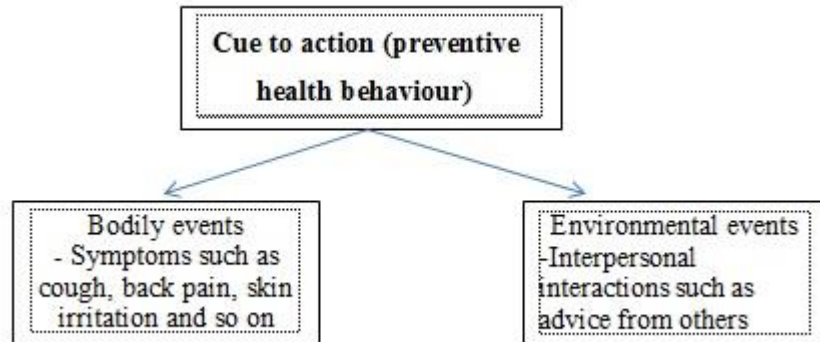
I adopted taxonomic analysis to regroup domain 5 into two main categories, feel confident and unconfident.



Domain 6: Cue to action (preventive health behaviour)

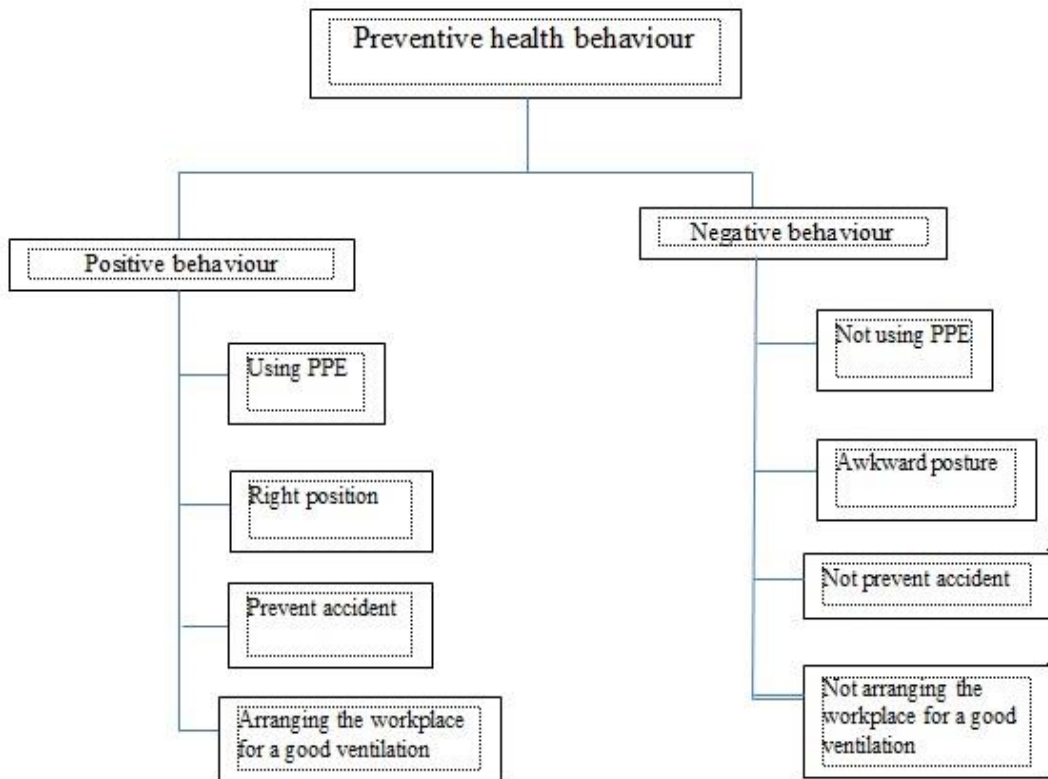
I adopted taxonomic analysis to regroup them into two main categories, bodily

events and environmental events.



Domain 7: Preventive health behaviour

I regrouped preventive health behaviour into two main categories, positive and negative behaviour.



“Theme analysis” was applied to compare and contrast the coding of each interview transcript against the others in searching for their common principles and

relationships, aiming at answering the research question. As shown in the figure above, I answered the research question, “What are the preventive health behaviours of the second-hand clothing sellers?”

The analysis was a dynamic process in which the steps moved back and forth with my intention of answering all of the research questions as well as to verifying the findings.

Appendix 6

Spending time for observations and interviews

Spending time for observation

Participant	Markets where they sell the clothes				PS
	Night market	New market	Coconut market	Budee market	
1	√(3, 9)*	-	√(1, 1)*	-	Total hours of observation 10 hours
2	√(2, 4)*	-	√(2, 8)*	-	Total hours of observation 12 hours
3	√(2, 6)*	-	-	√(2, 6)*	Total hours of observation 12 hours
4		√(2,6)*	√(2, 6)*	√(2,6)*	Total hours of observation 18 hours
5			√(3, 9)*		Total hours of observation 9 hours
6	-	√(2,4)*	√(2,4)*	√(2,4)*	Total hours of observation 12 hours
7	-	-	√(2,4)* +her stall (2,4)*	-	Total hours of observation 8 hours
8	√(2, 4)*		√(2, 6)*		Total hours of observation 10 hours
9	√(2, 3)*		√(2, 4)*		Total hours of observation 7 hours
10	-	-	√(2, 6)* +her shop (1,3)*	√(2,5)*	Total hours of observation 14 hours
11	-	-	√(3,9)*	-	Total hours of observation 9 hours
12	-	-	√(3,7)*	-	Total hours of observation 7 hours
13	√(3,9)*	-	-	-	Total hours of observation 9 hours
14	-	withdraw-	√(3, 9)*	-	Total hours of observation 9 hours
15		√(2,6)*	√(2,6)*	-	Total hours of observation 12 hours
16	-	-	√(3, 9)*	-	Total hours of observation 9 hours
17	-	-	√(3, 9)*	-	Total hours of observation 9 hours
18	-	-		√(2, 7)*	Total hours of observation 7 hours
19	-	-	√(3, 9)*	-	Total hours of observation 9 hours
20	-	-	-	√(2, 6)* +her shop (2, 6)*	Total hours of observation 12 hours

Participant	Markets where they sell the clothes				PS
	Night market	New market	Coconut market	Budee market	
21	-	-	✓ (2, 4)*	✓ (2, 5)*	Total hours of observation 9 hours
22	-	-	✓ (2, 5)*	✓ (2, 5)*	Total hours of observation 10 hours
23	-	-	✓(3, 8)*	-	Total hours of observation 8 hours
24	-	-	✓(3, 9)*	-	Total hours of observation 9 hours
25	-	-	✓(3, 9)*	-	Total hours of observation 9 hours
26	-	-	✓(3, 8)*	-	Total hours of observation 8 hours
27	-	-	✓(3, 9)*	-	Total hours of observation 9 hours
28	-	-	✓(3, 8)*	-	Total hours of observation 8 hours

*= The numbers and total times of my observations

Total hours of observation in December=0 hours (storm and flood)

January = 44 hours

February=54 hours

March=60hours

April=46 hours

May=62 hours

June=8hours

Total time of my observation =274-9 (the 14th participant) = **265 hours**

Spending time for interview

Par	Gender	Type of selling clothes	Total hours of interview
1	Male	Men's T-shirts/Shirts	1 hour 6 minutes
2	Male	Children's clothes	1 hour 13 minutes
3	Female	Women's clothes	40 minutes
4	Male	Men's clothes	39 minutes
5	Male	Children's clothes	49 minutes
6	Male	Women's clothes	38 minutes
7	Female	Mixed clothes	41 minutes
8	Female	Women's clothes	41 minutes
9	Male	Women's clothes	43 minutes
10	Female	Children's clothes	54 minutes
11	Female	Children's clothes	44 minutes
12	Male	Children's clothes	58 minutes
13	Male	Men's shirts/Shirts	42 minutes
14	-	-	-
15	Female	Socks	44 minutes
16	Male	Mixed clothes	52 minutes
17	Female	Children's clothes	45 minutes
18	Male	Mixed bags	1 hour 18 minutes
19	Female	Towel	41 minutes
20	Female	Children's clothes	1 hour 3 minutes
21	Male	Children's clothes	54 minutes
22	Male	Women's clothes	44 minutes
23	Female	Towel	40 minutes
24	Female	Mixed bags	37 minutes
25	Male	Mixed clothes	36 minutes
26	Male	Men's T-shirts/Shirts	1 hour 2 minutes
27	Male	Pants	39 minutes
28	Female	Mixed clothes	49 minutes

Summary

Spending time for interview around **40-60 minutes** (Average= 49 minutes)