CHAPTER 1: INTRODUCTION

The first chapter begins with a brief introduction to the research topic. The next section will first cover the statement of research problem. This is followed by research questions and purpose with the specific research objectives. Next, significance of the study will be discussed. Lastly, the organisation of the report will be outlined.

1.1 Introduction

Consumer health awareness and consciousness has increased around the world in recent years. Evidently, there is a growing focus on health related issues in the media and an increasing government spending on health campaigns especially from developed nations. This health and wellness trend also extends to Malaysia. The increased health consciousness among Malaysians may be partly due to the environmental and health crises that have threatened public health such as the rampant forest fire that caused hazardous haze, air pollution and other diseases such as SARS epidemic, dengue fever epidemic in recent years (The Star, 25 April 2006). Besides, the initiative to improve public health on the part of government has also undoubtedly contributed to the increased public awareness of healthy lifestyle (Mohamad 2000).

Promoting healthy lifestyle are also among the various health initiatives in the Malaysian National Plan of Action on Nutrition (NPAN) by the Ministry of Health Malaysia (Mohd Shariff and Khor 2005). Lifestyles or simply ways of living are one of the most significant factors influencing individual health and wellness (Divine and Lepisto 2005). From the marketing perspective, consumer healthy lifestyle creates new opportunities and driving innovation and at the same time presents marketing challenge to marketers in the health-
related industries such as fitness clubs, food, health care, insurance, and medical. The changing consumer attitude and behaviour toward healthy lifestyle will certainly heighten their interest in healthier products and services choices. For instance, health spas and fitness clubs have spread across especially in Malaysia urban cities (Ramli 2005).

In the food industry, numerous low-fat, low-cholesterol, low-sugar, and low-preservative food have been launched and widely promoted in the market. It is also evident that medical services such as homeopathic treatment based on herbs, acupuncture and traditional massage are becoming popular in Malaysia (Traffic Network, 22 June 2000). Marketers in the health industry also face considerable marketing challenges partly due to consumers’ unhealthy habits and preference to sedentary lifestyle which are evident in the media reports of obesity (Mohd Shariff and Khor 2005), smoking (The Star, 21 Dec. 2006), lack of exercise (Andres 2006) and poor eating habits among Malaysians (Mohamad 2000). Obviously, the increasing health care costs and public health concern highlight the need to examine the factors influencing consumer healthy lifestyle behaviours, so that marketers can design creative and effective strategies that help to persuade consumers to adopt healthy lifestyles.

Bloch (1984) views healthy lifestyle as an orientation toward health prevention for the maximisation of personal wellness. While healthy lifestyle encompasses a wide variety of behaviours such as tobacco-free lifestyle, healthy eating, regular exercise and supportive environment (Omar 2002), most healthy lifestyle research has focused on diet and exercise (Divine and Lepisto 2005). Kraft and Goodell (1993) argue that consumer shift in exercise and dietary behaviours have been the most visible lifestyle change. In their analysis of the healthy lifestyle consumer, Divine and Lepisto (2005) found exercise frequency to be important in differentiating between the healthy and unhealthy consumers. From a marketing perspective, exercise is associated with an orientation toward consumption as
they are a set of activities, interests, and opinions that are related to the consumption of various health-related products and services (Kraft and Goodell 1993). Exercise is regarded as a recognised component of healthy lifestyles and desired public health behaviour (Bungum and Morrow 2000). In view of its importance, this study focuses on exercise as one of the components of healthy lifestyle behaviour.

It is widely known that regular physical activity and fitness contribute to overall health and fitness (Ooyub and Omar 2002). Regular exercise is associated with a significant decline in the risk of cardiovascular complications, high blood pressure, obesity and weight management, and mortality rates (Blair 1993) and even reduction of symptom of depression and anxiety (Ministry of Health 2006). Despite the facts that these positive physical and psychological benefits of exercise are well documented and well publicised, the levels of physical inactivity are increasing worldwide (Bond and Batey 2005). According to the National Health and Morbidity Survey II (1996), only 11.6% of Malaysian participates in physical activity at least three times a week. Furthermore, 69.1% of Malaysian does not participate in physical activity at all, followed by 19.3% of Malaysian who do physical activity once or twice a week (Ministry of Health 1996). Due to the various health and social problems associated with sedentary lifestyle, research into investigating determinants affecting exercise behaviour is warrant.

The determinants of consumer healthy lifestyle behaviour have great influence on the way many marketers in the food, healthcare and medical services industry market their products and services. A good understanding of the shifting consumer attitude and other social psychological factors influencing healthy lifestyle behaviour is integral to capitalising on these opportunities. Hence, a thorough understanding of what drives people adopting healthy
lifestyle is paramount. However, health-related marketing is not as simple as classifying consumers into “healthy” or “unhealthy” groups. A complex balance of appropriate components should be taken into account in developing a solid theoretical model to examine the underlying factors that determine healthy lifestyle behaviour. The present research drew upon one of the most established social psychology theories about the way in which perceptions influence actions, the Theory of Planned Behaviour (TPB, Ajzen 1991). This study attempts to integrate TPB and the Five-Factor Model (FFM, Tuples and Christal, 1961; Norman, 1963) of Personality which aims to examine the relationships among the proposed model variables, exercise intention, and exercise behaviour simultaneously.

1.2 Statement of Research Problem

Although there is general support for the use of TPB, the sufficiency of the model has been questioned. Many studies challenge Ajzen’s assumption that the TPB predictors are sufficient to account for intentions and behaviour by including additional constructs in the prediction equation with the aim to show significant improvement in the predictive power of their model (Armitage and Conner 2001; Hagger, Anderson, Kyriakaki and Darkings 2007). However, Ajzen (2001) comments that most part of the improvement in predictive ability were relatively small and hence the results are not generalisable to other behavioural domains despite the fact that significant improvements were found in these studies. Ajzen (1991) suggests that the TPB framework is open to the inclusion of additional predictors provided they increase the predictive validity of the theory after the current TPB constructs have been taken into account. Nevertheless, the additional constructs should only be proposed and added with solid empirical evidence for the sake of parsimony, the proposed
additional constructs should also be conceptually independent of the current TPB predictors, rather than be redundant with them (Ajzen 1991).

It is observed from the literature review that many behavioural studies have extended the TPB original model by incorporating additional constructs such as moral value (e.g., Ajzen and Driver 1992b), social support (e.g., Courneya and McAuley 1995; Courneya, Plotnikoff, Hotz and Birkett 2001; Rhodes, Jones and Courneya 2002; Sylvia-Bobiak and Caldwell 2006), past behaviour (e.g., Terry, Hogg and White 1999; Perugini and Bagozzi 2001; Bamberg, Ajzen and Schmidt 2003), and socio-demographic characteristics (e.g., Rhodes, Courneya and Jones 2004; Rhodes, Macdonald and McKay 2006). Other researchers have used such social cognitive models like Health Promotion Model (e.g., Piazza, Conrad and Wilbur 2001; Grubbs and Carter 2002), Self-Determination Theory (e.g., Wilson and Rodgers 2004), Transtheoretical Model (e.g., Nigg and Courneya 1998; Plotnikoff, Hotz, Birkett and Courneya 2001) and Bandura’s Social Cognitive Theory (e.g., Netz and Raviv 2004) in examining exercise behaviour. Psychological theory indicates that the personality of an individual guides and directs human behaviour (McCrae and John 1992).

Personality is an important factor to be considered in predicting individual differences in behaviours. Specifically, the role of personality has received increasing attention in exercise participation and the relationship between personality and health-related behaviours such as sports, exercise, and physical activity has long been a focus of the studies on personality research (Courneya and Hellsten 1998). Despite the fact that personality is just one of the social environmental and lifestyle factors, it still plays an important role in determining health behaviours that should not be overlooked (Bogg, Voss, Wood and Roberts 2007).
The most popular and widespread acceptance approach among psychologists for studying personality traits is the Five-Factor Model (FFM) or Big Five Dimensions of Personality (Rhodes and Courneya 2003a; Rhodes, Courneya and Jones 2005). Courneya and Hellsten (1998) report that extraversion, conscientiousness, and neuroticism are the relevant personality dimensions in exercise domain and recommended future research to further test the FFM of personality. A review of the literature on 26 previous studies examines the relationship between personality and exercise and physical activity has been carried out (see summary in Table 3.4). The researcher notices that some of these studies focus on personality as an outcome of exercise. To the contrary, others have focused on personality as an antecedent of exercise. Other researchers have either compared the personalities of inactive/unfit persons to active/fit persons or examined the role of personality in predicting exercise adherence. However, very few researchers have looked into a more comprehensive and integrative model which enables the examination of factors that influence exercise behaviour simultaneously.

Numerous studies across a range of behaviours including those in the exercise domain have found general support for the theories of reasoned action and planned behaviour (Ajzen 1991; Sheppard, Hartwick and Warshaw 1988). However, questions remain as to the mediating role of behavioural intention and the operationalisation and measurement issues related to the construct of subjective norm and perceived behavioural control (PBC). For instance, the support for subjective norm role in both theories has been relatively weak (see Rhodes, Jones and Courneya 2002; Payne, Jones and Harris 2004; Mahon, Cowan and McCarthy 2006). Armitage and Conner (2001) argue that the traditional injunctive norm measure developed by Ajzen (1991) has not predicted behaviour well, including exercise behaviour (Hagger, Chatzisarantis and Biddle 2002). Some TPB researchers (e.g.,
Hausenblas, Carron and Mack 1997; Armitage and Conner 2001; Symons Downs and
Hausenblas 2003; Saunders, Motl, Dowda, Dishman and Pate 2004; Hagger and
Chatzisarantis 2005) have explained that the weak relationship is partly due to a narrow
conceptualisation and measurement. Therefore, further research is needed to examine
subjective norm before conclusions can be drawn.

There are three main social cognitive predictors (i.e., attitude, subjective norm, and
perceived behavioural control) posited in the original TPB model [Note: the term social
cognitive will be used interchangeably with these three TPB predictors]. Most studies using
the TPB model have modelled these social cognitive predictors as unidimensional concepts
including those studies in the exercise domain. Recently, several researchers (Rhodes and
Courneya 2003a; Hagger and Chatzisarantis 2005; Rhodes, Blanchard and Matheson 2006)
suggest to model the three social cognitive constructs as multiple-components measure.
Generally, their research findings provide support for the measurement distinctiveness. For
instance, the structural equation modelling (SEM) results in Rhodes, Blanchard and
Matheson’s (2006) study showed an average additional explained variance of 11% to 36%
when the social cognitive constructs were modelled as multi-component.

Besides, empirical studies conducted by Hagger and Chatzisarantis (2005) and Rhodes and
Courneya (2003b) reveal that all concepts indicated significantly better fit when modelled as
separate component and hence support the discriminant validity of differentiated TPB
measures. Additionally, in their attempt to test the efficacy of higher-order conceptualisation
compared to multidimensional TPB structure, Rhodes and Blanchard (2006) support the
multidimensional TPB measures over the higher-order structures. These findings seem to
suggest a more superior measurement when the social cognitive predictors are modelled as
multidimensional components.
Although there are empirical evidences to support the discriminant validity of the differentiated TPB structure, some researchers still aggregate the respective indicators to reflect the global TPB predictor, despite recognising the conceptual differences between these components (Armitage and Conner 2001). The research issue as to whether an aggregation of social cognitive components to form general scale of attitude, subjective norm, and PBC achieve better model fit or disaggregated TPB measures should be given attention. Further research to look into this research query would certainly warrant.

Research in the exercise literature has been focused on examining the relationships among the key variables in their study. Other than the work of Symons Downs, Graham, Yang, Bargainier and Vasil (2006) to examine the moderating effect of exercise groups, very few researchers have looked into the exercise group differences. Specifically, no empirical research has been conducted to address whether distinct exercise groups (e.g., ‘high active’ exercisers and ‘low active’ exercisers) can be differentiated on the basis of personality and social cognitive factors.

The majority of TPB studies have focused on the key relationships between variables. Efforts in examining demographic differences with respect to TPB and personality factors have been largely neglected. Although there have been relatively more research relating to demographic differences in personality factors, these studies have been much dominated in the United States. To date, no empirical exercise study has looked into a more comprehensive analysis of the demographic differences in both the TPB and personality constructs.
The analysis of demographic, social cognitive and personality characteristics of exercisers could be useful to marketers in segmenting markets and positioning products and services. Armed with this knowledge, marketers are in a much better position for market planning and development of current or new offerings, and development of appropriate communication strategies. Therefore, there is a strong need to explore the exercise group differences in terms of personality and social cognitive factors as well as to examine the predictive power of social cognitive and personality factors in discriminating exclusive exercise groups.

Most studies that apply TPB model include only intent and not actual behaviour (see Godin and Kok 1996, for review). Specifically, efforts on the link between intention-behaviour as delineated in the TPB model are not attempted by many studies (e.g., Mummery, Spence and Hudec 2000; Rimal 2002; Blanchard, Rhodes, Nehl, Fisher, Sparling and Courneya 2003; Cunningham and Kwon 2003) in the exercise domain. There is considerable theoretical and empirical literature indicating that intent and behaviour are highly correlated (Ajzen 1991; Fishbein and Ajzen 1975). The fact remains, however, that it is unknown if those people who intended to exercise actually do so eventually (Milne, Orbell and Sheeran 2002). The focus on attitude and subjective norms in predicting intentions, not the behaviour tend to pose problem with the use of TPB or TRA models (Baranowski, Cullen and Baranowski 1999). Further research would benefit from the inclusion of actual behaviour into the model.

In a meta-analysis of TPB in health domain, Godin and Kok (1996) found that majority of the TPB researchers have focused merely the direct antecedents of intention and behaviour. It is evident in the TPB literature that there is less attempts in examining the mediating role of exercise intention empirically. Specifically, among the limited studies which have examined the effects of personality and the TPB variables on a given behaviour, researchers
have either focused on how well the TPB predictors and personality factors predict exercise behaviour (Courneya, Bobick and Schinke 1999) or examine the moderating role of personality factors within the TPB framework (Rhodes, Courneya and Jones 2005). Hence, a more robust empirical approach to test the mediating role of exercise intention that links TPB and personality predictors to exercise behaviour is warrant.

Another shortcoming is that majority of the TPB studies in exercise domain have used undergraduate students as their subjects. Also, most of the articles in health literature appeared to have focused on narrow health aspects and / or very specific population (Plante and Rodin 1990). To date, there is no research conducted on integrating personality and social cognitive constructs to predict exercise behaviour from consumer behaviour perspective. It would be of theoretical value to test an integrative model of TPB and FFM model using a different sample.

In view of these shortcomings in the literature, this study addresses these issues with an attempt to advance knowledge on health-related behaviour studies and provide practical marketing implications for health-related products or services providers. The study will be more solid and comprehensive with the integration of relevant personality and social cognitive constructs using two established theories to explain and predict exercise behaviour.

1.3 Research Questions

Previous studies on health-related behaviour have produced somewhat mixed results by researchers. The research issues mentioned in the problem statement lead to a number of unanswered questions. This study addresses the following research questions:
1. What is the model efficacy and predictive ability of the proposed integrated model of FFM and TPB in predicting exercise behaviour?

2. Are the three TPB predictors (i.e., attitude, subjective norm, and PBC) best represented as a single concept or a disaggregated multi-components TPB structure?

3. What is the role of social cognitive and personality constructs in predicting exercise intention and exercise behaviour? Which particular construct exert the strongest influence on the formation of exercise intention and behaviour?

4. Is there a mediating path of exercise intention that links social cognitive and personality constructs to exercise behaviour?

5. Can ‘high active’ exercisers and ‘low active’ exercisers be differentiated on the basis of personality and social cognitive factors?

[Note: ‘high active’ exerciser is defined as individuals who exercise 4 or more times per week; ‘low active’ exerciser is defined as individuals who exercise 3 or less times per week (Symons Downs et al. 2006)]

1.4 Research Purpose

As Ajzen and Fishbein (1980, p. 223) suggest, “Before we can provide guidelines for the formulation of persuasive communications that will be effective in changing behaviour, we must have an understanding of the factors that determine behaviour”. The present study examines various attitudinal, cognitive, social and personal factors that may influence or be associated with individual exercise behaviour. Social cognitive and personality constructs might simultaneously affect exercise intention and, consequently, influence exercise...
behaviour (Ajzen 1991). The present research aims to propose, operationalise, and empirically test a theoretical model that integrates the five personality factors and social cognitive constructs contained in the TPB to predict exercise intention and behaviour. The proposed integrated model of the TPB and FFM in predicting individual exercise behaviour is depicted in Figure 1.1.

**Independent Variables**

<table>
<thead>
<tr>
<th>TPB Model</th>
<th>FFM Model</th>
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<tr>
<td><strong>Attitude Components</strong></td>
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<td>Instrumental Attitude</td>
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<td>Affective Attitude</td>
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<td><strong>Subjective Norm Components</strong></td>
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<td><strong>Perceived Behavioural Control</strong></td>
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<td>Perceived Self-efficacy</td>
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<td>Perceived Control</td>
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<td><strong>Extraversion</strong></td>
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<td><strong>Conscientiousness</strong></td>
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<td><strong>Neuroticism</strong></td>
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<td><strong>Openness to Experience</strong></td>
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**Figure 1.1: The Research Framework of the Study**

Note: This framework was adapted from various sources (i.e., Ajzen 1991; Rhodes and Courneya 2003a; Hagger and Chatzisarantis 2005)

Beyond this application of the integrated model to exercise behaviour, the present study also examines the differences between ‘high active’ exercisers and ‘low active’ exercisers in terms of relevant personal, social and psychological factors. The implications of this study will be discussed from consumer behaviour perspective.
1.5 Research Objectives

This study attempts to conceptualise relevant variables in the health context and relate them in an integrative model. In line with the research questions and purpose, specific research objectives are developed as below:

1. To empirically test the model efficacy and predictive ability of the proposed integrated model of FFM and TPB in predicting exercise behaviour.

2. To compare the measurement efficacy between the traditional single concept versus the disaggregated multi-components TPB structure.

3. To analyse the influence of social cognitive constructs and personality factors on exercise intention and exercise behaviour.

4. To determine the mediating role of exercise intention that links the social cognitive predictors and personality factors to exercise behaviour.

5. To investigate group membership into ‘high active’ and ‘low active’ exercise groups based on personality and social cognitive constructs.

1.6 Significance of the Study

Despite the fact that most people are aware of the benefits of exercising and the potential risks of physical inactivity, especially among those in middle and higher socio-economic status, there is still low participation rate in exercise activities (Bond and Batey 2005). Indeed, an empirical study conducted by Jayanti and Burns (1998) demonstrates that health knowledge has no significant effect on preventive health care behaviour. It seems
that health awareness and knowledge have little influence on individual exercise participation despite various health promotion campaign organised by the government agencies. There might possibly be other social and/or psychology factors that influence individual exercise participation. Therefore, the health benefits of exercising coupled with the increasing sedentary lifestyle among general publics give a strong reason for research into the determinants of exercise behaviour.

Health-related behavioural studies have received great attention in the literature from various disciplines such as health science, medicine, health and social psychology. There exist a large body of knowledge on health behaviours; however, most exercise behaviour related studies are conducted in the West and mostly from the social psychology, medicine and health science perspective. Nevertheless, none of the studies examines the psychosocial predictors of exercise behaviour from consumer behaviour and/or marketing perspective. The present study will add theoretical value to the literature by providing an in-depth understanding of how various social-demographic and psychological factors affect individual healthy lifestyle behaviours. It is expected that the proposed integrative model of exercise behaviour will contribute to the development of health-related marketing theory.

As mentioned earlier, the sufficiency issues associated with the TPB original model have been addressed by most researchers by including additional constructs in their modified TPB model. The researcher observes that most of the additional predictors adopted in these past studies which aim to increase the predictive power of their modified model are derived intuitively and arbitrarily. However, a more comprehensive and integrative model is needed in the examination of predictors that affect exercise behaviour. The present study fills this research gap by empirically testing an integrative model that consists of several social cognitive and personality constructs which derived from two underpinning theories (i.e., the
TPB and FFM). Ultimately, it is hoped that the findings will provide a more comprehensive and coherent viewpoints in the study of healthy lifestyle behaviour.

The choices made by individual concerning exercise and fitness activities are a form of consumer behaviour. In the marketing perspective, consumers adopting a healthy lifestyle can be viewed as a specific market segment. Understanding the social-demographic and personality factors that influence consumer healthy lifestyle behaviour is important. Armed with this knowledge, marketers can segment the market according to these characteristics. For instance, food manufacturers and retailers could also use such information to determine the appropriateness of product, distribution, and promotional strategies that target at these segments. Besides, based on such information, health care marketers are in a much better position for market planning and development of current or new offerings. In term of communication strategies, such findings could help health care marketers to make better decisions as to how best in utilising marketing budgets for advertising, personal selling efforts, and other promotion activities.

Lastly, the pressure of escalating costs of public health care has been a major concern for people and the government. Government agencies are actively promoting public healthy lifestyle behaviour as it is crucial in reducing both health risks and medical costs. The researcher is convinced that the findings of present study will be useful for public policy officials and health professionals in their health promotion efforts. They may use such information to intervene effectively the growing incidence of obesity and other illnesses such as diabetes, heart attack that relate to physical inactivity and unhealthy diet.
1.7 Organisation of the Report

The research issues and problems presented previously have both theoretical and practical relevance and the findings will be based on an iterative process between deduction and induction. This thesis is divided into eight chapters. In Chapter 1, the research topic will first be introduced. This is followed by problem statement, research questions and purpose with specific research objectives being spelled out, and the significance of the study.

Chapter 2 sets the scene for the present study and covers a brief review on health-related research with the focus on exercise behaviour and its implications on consumer behaviour and marketing. Chapter 3 reviews several health behaviour theories and models including the TPB which forms the basis of the present study. The rationale for choosing the TPB model and other TPB-related research issues as well as the conceptualisations of the key construct for this study are also included. The theoretical framework of the study will be formed in Chapter 4 whereby the conceptual framework and the expected relationships among the constructs will be developed based on solid literature review.

Chapter 5 discusses methodological issues concerning the research design. First, the operational definition of each constructs and measurement development will be stated. Second, the research approach and instrument will be included. Then, the sampling design and data collection method will be presented. The method of analysis will also be briefly explained here. Chapter 6 and 7 cover a discussion on data analysis and interpretation of data. The findings of the study are summarised and discussed. This is followed by a critical review and refinement of the framework. In Chapter 8, the research findings are summarised; contributions to theory, methodology and practice will be covered. This is followed by the discussion of managerial implications, research limitations and suggestions for future study.