FACTORS INFLUENCING RESPONSIBLE BEHAVIOUR RELATED TO SAFETY AND HEALTH ON MOUNTAINS: A CASE STUDY OF CLIMBERS ON MOUNT KINABALU, MALAYSIA

MAHDI ESFAHANI

THESIS SUBMITTED IN FULFILMENT
OF THE REQUIREMENTS
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

SPORTS CENTRE
UNIVERSITY OF MALAYA
KUALA LUMPUR

2014

ABSTRACT

In mountaineering tourism, safety and health are pertinent aspects for both climbers and service providers. The climbers' behaviours largely determine the favourable or unfavourable outcomes of their activity. Using the Theories of Planned Behaviour and Expectation Disconfirmation, this study examines the relationships between personality, spirituality, satisfaction, attitude towards behaviour, norms and perceived behavioural control with responsible behaviour and loyalty intention among climbers on Mount Kinabalu in Borneo.

The questionnaire comprised of six sections which are demographic profile, responsible mountaineering behaviour, attitude, subjective norm, perceived behavioural control, satisfaction, loyalty intention, personality and spirituality. A panel of experts established the content validity of the initial drafted questionnaire. It was then subjected to face validity, pre-tested on five respondents with mountaineering experience to evaluate the questions' answerability. The researcher conducted the questionnaire's pilot testing on 107 Mount Kinabalu climbers to select suitable items and to check their reliability in measuring the constructs.

During the main data collection, a total of 916 climbers completed the questionnaires, immediately after completing their climb. The researcher carried out preliminary analysis, item-total correlation and Exploratory Factor Analysis (EFA), followed by Confirmatory Factor Analysis (CFA), to test the validity of the questionnaire in terms of convergent validity, fit indices, uni-dimensionality assessment, discriminant validity and construct reliability. A separate sample of 300 respondents was used to conduct the EFA, while the remaining sample of 616 was used for the CFA.

The results showed a high mean score for responsible mountaineering behaviour indicating that climbers paid close attention to behaviour related to health and safety. There are four newly discovered responsible behaviour dimensions in the mountains, which were termed as 'clothing requirement', 'food and drink requirement', 'obedience requirement' and 'equipment requirement'. This study also showed the importance of media and social norms in influencing climbers' behaviour. Spirituality, knowledge and norms influenced responsible behaviour among climbers. In addition, attitude towards behaviour partially mediated the relationship between spirituality and responsible mountaineering behaviour. Loyalty intention influenced responsible mountaineering behaviour and personality influenced both satisfaction and attitude towards behaviour.

Based on the study findings, the researcher discusses the knowledge, marketing and managerial implications. The two main knowledge contributions of this study are the four newly discovered dimensions of responsible mountaineering behaviour and the importance of knowledge dimension within the attitude construct in influencing responsible behaviour. Climbers are able to scale the mountain top without any technical skill and sophisticated equipment, and able to experience high altitude and cold weather in the tropical latitude. This could be used for marketing communication to attract prospective climbers. Study findings may direct the attention of the authority to the possible managerial implications in Mount Kinabalu National Park.

ABSTRAK

Dalam pelancongan pendakian, keselamatan dan kesihatan adalah aspek penting untuk kedua-dua pendaki dan pemberi perkhidmatan. Tingkah laku para pendaki sebahagian besarnya menentukan hasil yang menggalakkan atau tidak menggalakkan dalam aktiviti mereka. Dengan menggunakan Teori *Planned Behaviour* dan Teori *Expectation Disconfirmation*, kajian ini mengkaji hubungan di antara personaliti, kepuasan kerohanian, sikap terhadap tingkah laku, norma dan kawalan tingkah laku yang dilihat dengan tingkah laku yang bertanggungjawab serta niat kepatuhan di kalangan pendaki Gunung Kinabalu di Borneo.

Soal selidik yang digunakan mengandungi enam bahagianiaitu profil demografi, tingkah laku teknik mendaki yang bertanggungjawab, sikap, norma subjektif, kawalan tingkah laku yang dilihat, kepuasan, niat kepatuhan, personaliti dan kerohanian. Satu panel yang terdiri daripada pakar telah mengukuhkan kesahihan kandungan awal draf soal selidik. Soal selidik ini kemudiannya tertakluk kepada kesahihan muka yang diuji melalui lima responden yang mempunyai pengalaman mendaki untuk menilai kejawapan soalan dalam soal selidik. Pengkaji telah melakukan kajian rintis terhadap soal selidik tersebut ke atas 107 pendaki Gunung Kinabalu untuk memilih item yang sesuai dan untuk menyemak kebolehpercayaan dalam mengukur konstruk soal selidik.

Semasa pengumpulan data yang utama dijalankan, sejumlah 916 pendaki telah melengkapi soal selidik tersebut sejurus selesai pendakian mereka. Pengkaji telah menjalankan analisis awal, hubungan jumlah item, *Exploratory Factor Analysis* (EFA), diikuti dengan *Confirmatory Factor Analysis* (CFA), untuk menguji kesahihan soal selidik dari segi *convergent validity, fit indices, uni-dimensionality assessment, discriminant validity* dan kebolehpercayaan konstruk. Sampel seramai 300 orang yang berasingan pula telah

digunakan untuk menjalankan EFA, manakala sampel selebihnya seramai 616 orang digunakan untuk memperolehi CFA.

Keputusan kajian menunjukkan skor min yang tinggi untuk tingkahlaku pendakian yang bertanggungjawab dan ini menunjukkan bahawa pendaki lebih menumpukan perhatian kepada tingkah laku berkaitan dengan kesihatan dan keselamatan. Kajian ini mendapati penemuan empat perkara baru dari segi dimensi tingkah laku pergunungan yang bertanggungjawab iaitu keperluan pakaian, keperluan makanan dan minuman, keperluan kepatuhan, dan keperluan peralatan. Kajian ini juga menunjukkan kepentingan media dan norma sosial dalam mempengaruhi tingkah laku pendaki. Kerohanian, pengetahuan dan norma mempengaruhi tingkah laku bertanggungjawab di kalangan pendaki. Tambahan pula, sikap terhadap tingkah laku sebahagiannya mengantarai hubungan antara kerohanian dan tingkah laku pendakian yang bertanggunjawab. Niat kepatuhan mempengaruhi tingkah laku pendakian yang bertanggungjawab dan personaliti mempengaruhi kepuasan dan sikap terhadap tingkah laku.

Berdasarkan dapatan kajian ini, pengkaji membincangkan implikasi pengetahuan, pemasaran dan pengurusan. Dua sumbangan utama kajian ini dari segi pengetahuan adalah keempat dimensi baru tingkah laku pendakian yang bertanggungjawab dan kepentingan dimensi pengetahuan di dalam lingkungan dalam mempengaruhi tingkah laku yang bertanggungjawab. Para pendaki mempunyai keupayaan untuk mendaki ke puncak gunung tanpa sebarang kemahiran teknikal, peralatan canggih dan boleh mengalami altitud tinggi paras laut dan cuaca sejuk di latitud tropikal. Perkara ini kemungkinan boleh digunakan untuk komunikasi pasaran bagi menarik ramai bakal pendaki. Dapatan kajian mungkin juga boleh menujukan perhatian pihak berkuasa kepada kemungkinan implikasi pengurusan di dalam Taman Negara Gunung Kinabalu.

Acknowledgements

The completion of this thesis was not possible without the help and support of many people to whom I am indebted.

Firstly, my appreciation is to my Lord, GOD, through WHOM all things are possible.

A big thank you and much appreciation for my supervisors, Dr. Selina Khoo and Prof. Dr. Ghazali Musa, whose knowledge, expertise, commitment, patience and humour, made this study possible.

I would also to thank the Sports Centre, University of Malaya for helping me in the whole process of my study and the Kinabalu National Park for the support during my data collection process. And special thanks to climbers who participated voluntarily in the current study to better understand responsible mountaineering behaviour.

I would like to extend my thanks to my friends and colleagues, Dr. Ong Tah Fatt, Mr. Andre Muller, Mr. Payam Ansari, Mr. Januarius Shaftang, Dr. Hamid Daneshjo, Dr. James Gaskin and Dr. Vincent Teo, for their help and encouragement in the whole process in my study to making this research possible.

My appreciation is especially to my darling wife, Touba and my children, Mahya, Zahra and Mahdiar. This study would not have been completed without all of your support during this long journey and challenging process. Thank you for your love, patience, sacrifice and belief in me. Your faith in me was the wind beneath my wings.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF SYMBOLS AND ABBREVIATIONS

Abbreviation	Meaning
A	Agreeableness
AFM	Absolute Fit Measures
AGFI	Adjusted Goodness of Fit Index
ATT	Attitude
ATTK	Attitude-Knowledge
ATTA	Attitude-Awareness
AVE	Average Variance Extracted
BNSS	Basic Needs Satisfaction in Sport
C	Conscientiousness
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CITC	Corrected Item-Total Correlation
C.R.	Critical Ratio
CR	Composite Reliability
D	Disconfirmation
Df	Degree of Freedom
E	Extraversion
EDT	Expectation Disconfirmation Theory
EFA	Exploratory Factor Analysis
EP	Pre-Purchase Expectation
FACIT	Functional Assessment of Chronic Illness Therapy
FFM	Five Factor Model

GFI	Goodness of Fit Index
H	Hypotheses
IFI	Incremental Index of Fit
IFM	Incremental Fit Measures
LOM	Life Orientation Measure
LOY	Loyalty Intention
MLE	Maximum Likelihood Estimation
MPS	Mental, Physical and Spiritual Well-Being Scale
N	Neuroticism
NAM	Norm-Activation Model
NEO-PI-R	The NEO Personality Inventory Revised
NICA	National Interfaith Coalition on Aging
NS	Not Significant
O	Openness to Experience
P	Post-Purchase Performance
PBC	Perceived Behavioural Control
PER	Personality
PFM	Parsimonious Fit Measures
PGFI	Parsimony Goodness-of-Fit Index
PNFI	Parsimonious Normed Fit Index
PSQ	Prague Spirituality Questionnaire
QOL	Quality of Life
RB	Responsible Behaviour
RMSEA	Root Mean Square Error of Approximation

RMSR	Root Mean Square Residual
RQ	Relationship Quality Model
SAT	Satisfaction
SEM	Structural Equation Modelling
SHALOM	The Spiritual Health And Life Orientation Measure
SHM	Spiritual Health Measure
SH/WB	Spiritual Health/Well-Being
SN	Media/Subjective Norms
SP	Spirituality
STS	Self-Transcendence Scale
SWB	Spiritual Well-Being
SWLS	Satisfaction with Life Scale
TEQ	Transformative Experience Questionnaire
TLI	Tucker-Lewis Index
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
UNESCO	United Nations Educational, Scientific and Cultural Organization
VBN	Value-Belief-Norm Theory
VIF	Variable Inflation Factor
x^2	Chi-Square Statistics
x^2/df	P-Value, Relative Chi-square

CHAPTER 1: INTRODUCTION

1.1 Introduction

Researchers describe adventure in different ways. One person might perceive an activity as an adventure whereas another person does not see any adventurous character in the activity (Pomfret, 2006). However, most people would agree that mountaineering is an adventurous activity. Mountaineering is a growth area of adventure tourism. It can consist of different activities such as backpacking, climbing, hiking, physical fitness programing, via ferrata and wilderness trips (Pomfret, 2006). Mountaineering is an adventurous sport based on physical activity, challenge and risk taking (Beedie & Hudson, 2003). Although resource managers or the public often cannot understand the reasons for participating in adventure activities like mountaineering, these activities are often engaged in because of expected rewards (Ewert, 1994). But what kind of rewards could be gained by risking one's health or life during mountaineering? Some researchers believe that the goals and rewards of taking part in mountaineering probably are working in a team and the close connection with the natural environment (Ewert, 1994; Wankel & Berger, 1990). Overcoming a challenge by reaching the summit can be seen as rewarding (Ewert, 1994).

Mountains are commonly developed into and promoted as recreational destinations and are therefore attractive to many tourists (Nepal & Chipeniuk, 2005). With the increasing number of tourists, socioeconomic opportunities and also environmental threats are evolving around mountain areas (Nepal & Chipeniuk, 2005). Identifying and introducing unique characteristics of mountains can increase the number of climbers who visit the areas, and hence create new economic opportunities for mountain regions. The creation of safe climbing destinations that encourage health promoting physical activities can lead to a rising number

of climbers with various skills and personal background. With the increase in adventure tourism in the mountains, so too is the incidence of mountaineering related injuries (Windsor, Firth, Grocott, Rodway, & Montgomery, 2009). The incidence occurs due to the inherent risks and dangers related to this activity, especially in high altitude environments (Musa, Hall, & Higham, 2004). Therefore, to minimize the number of injuries in the mountains it is necessary to pay attention to responsible mountaineering behaviours which have a direct impact on safety and health.

1.2 Kinabalu National Park

Malaysia is a tourist destination which offers access to beautiful natural resources all year round. Its unique and spectacular landscapes attract many tourists seeking outdoor recreation. One of the most popular destinations for tourists in East Malaysia is the Kinabalu National Park where the altitude ranges between 150 metres to more than 4,000 metres. It is also home to 5,000 to 6,000 plant species (Ling, Bagul, & Furuoka, 2007). The mountain landscapes and the diversity in flora and fauna are two key draws attracting tourism to the Kinabalu National Park (Ching, 2008, 2009; Ling et al., 2007).

The Kinabalu National Park is located in the Malaysian state of Sabah, on the island of Borneo. Approximately 90 kilometres from the city of Kota Kinabalu, the Park is a rich natural environment with diverse types of flora and fauna. It became a national park in 1964 (Ling et al., 2007). In December 2000, the Park became the first World Heritage Site in Malaysia for its "outstanding universal values" (Ching, 2009; Tagi, 2002). The United Nations Educational, Scientific and Cultural Organization (UNESCO) recognised Kinabalu National Park as one of the world's most important sites for biological and ecological diversity (Ching, 2009; Ling et al., 2007; Tagi, 2002). Several thousand plants and animals

can be found in the park, with hundreds being unique to this park. Probably the best known of these plants are the Orchidaceae (orchid) and pitcher plants which are known to consume insects and small prey (Rheims & Brescovit, 2004; Slik et al., 2009; Wells, Pfeiffer, Lakim, & Linsenmair, 2004). These two, although not usually seen on the more popular tourist tracks, are considered to be among the most well-known of local flora. Varieties of pitcher plant include Nepenthaceae and Sarraceniaceae but in Kinabalu National Park it is the variety Nepenthes Raja that is the most visited by tourists and naturalists. This variety is capable of containing over three litres of water when it is full. Another exceedingly rare plant found in Kinabalu National Park is the Rafflesiaceae (Rafflesia) which does not bloom very frequently and lasts only for a short time when it does. The Rafflesia is the largest known plant in the world (Anfraix, 2005; de Foucault, 2000).

The park offers a range of activities: trekking, wildlife and bird watching, photographing, plant spotting, running (i.e. Mount Kinabalu International Climbathon), mountain biking, hang-gliding, swimming in hot sulphur water pools, golfing and canopy walking (Ching, 2009; Tagi, 2002). To protect against overcrowding, the Park authorities limit the number of climbers who can climb Mount Kinabalu each day. In addition to that, each group of eight climbers are required to have a guide during ascent and descent (Ching, 2008).

1.3 Mount Kinabalu

The Kinabalu National Park is commonly regarded by the local community as a sacred place with a great diversity of flora and fauna (Ling et al., 2007). Despite this, its main tourist attraction is the over 4,000 metres high Mount Kinabalu, one of the world's most accessible

mountains to the climbers. This fact, along with the designation as a World Heritage site have made Mount Kinabalu one of the most attractive climbing destinations in the world.

As stated earlier, local people consider Mount Kinabalu as a sacred mountain and therefore it was left unexplored for many years. But in 1815, Sir Hugh Low, known as the first person to climb Mount Kinabalu reached the summit. This marked the beginning of Mount Kinabalu's popularity to climbers. Mount Kinabalu is promoted to local and international climbers through the internet and travel agencies. The Mount Kinabalu International Climbathon also attracts climbers from around the world to participate in this competition. No unique skills or special equipment are required to scale the mountain. Figure 1.1 illustrates the two common routes taken by climbers to scale Mount Kinabalu.

Climbers usually take two days to climb Mount Kinabalu although some do it in one day. Both experienced and inexperienced climbers climb Mount Kinabalu. No special mountaineering equipment is needed and this is one of the benefits of climbing this mountain. As with all outdoor adventures, sufficient preparation must be made in case of accidents, emergencies and the likelihood of poor weather. It is common for sudden weather changes to occur in hilly and mountainous regions (Salick, Biun, Martin, Apin, & Beaman, 1999; Takyu, Aiba, & Kitayama, 2002). Climbers are recommended to use appropriate protective covering to shelter themselves and their gear. They climbers should also carry several layers of clothing including external waterproof layer to prepare for changes in weather from warm to cold or wet and then back to warm,. Very warm clothing is required for the final dawn climb to the peak. Apart from these essentials climbers are advised to carry a torch with new or fully charged batteries, water, light refreshment, and for those who wish to record the event, a camera or video device.

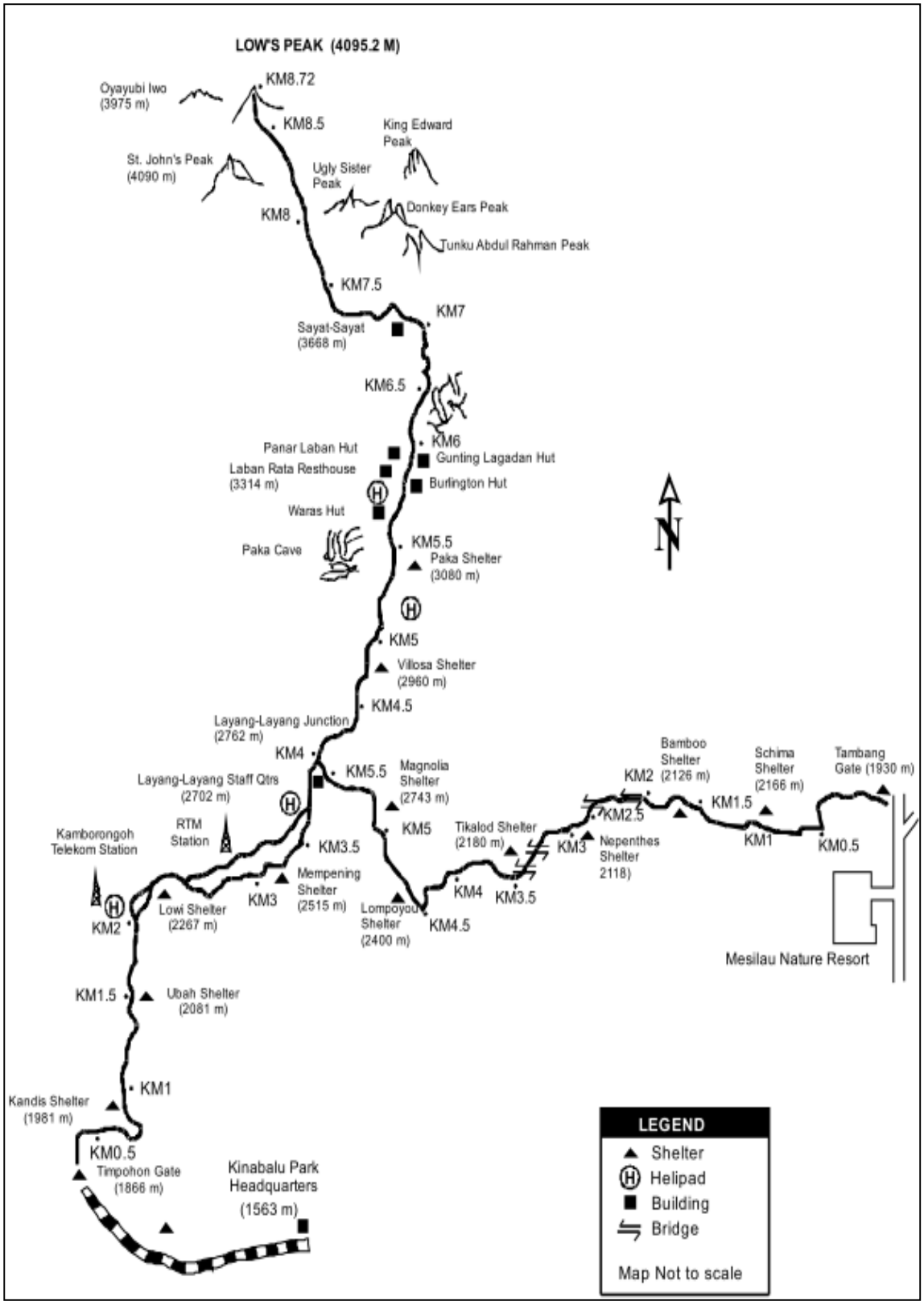


Figure 1.1. Ascent of Mount Kinabalu

After climbers check into the headquarters and pay their fees, permits slips are issued and guides are chosen. Advice is offered about climbing and rest sites to recuperate where needed. Experienced climbers and outdoor sporting enthusiasts are usually well prepared with survival equipment and may use their own water purifying materials if desired. Although the climb starts off gradually, climbers are advised to trek slowly and carefully so that they acclimatise to the altitude. Climbers must carry and have available for display their individual slip which contains information about their climb such as a unique reference number and the dates of the climb. There are two treks that travel up Mount Kinabalu: the Timpohon trek and the Mesilau trek (Anfraix, 2005; Fritsch & Bush, 2011).Of these two treks, the more commonly and often chosen Timpohon trek is considered the easier climb (Figure 1.1).

Climbers rest overnight in accommodation at a location called Laban Rata at around 3,270m. At this height and above, the air becomes thinner and has less oxygen causing some climbers to feel the strain of the climb, which may include dizziness, headache and shortness of breath. This is termed mountain or altitude sickness and may cause a persistent low-level ache in the front and sides of the head. As climbers approach the accommodation, the thinner air will most likely effect even the more experienced climbers. Even though the terrain is easier to manage, the body may be exhausted and climbers must pay great attention not to let their concentrate slip as this might lead to a fall.

The climb up to the summit starts between 2 am and 2.30 am in order to reach the summit at sunrise. This final lap is characterized by lush growth and the steps may be difficult to see in the dark. There is a rope to assist in the climb from this point. This rope continues as far as Low's Peak but the journey there involves some dangerous climbing, made worse by the prevailing darkness. It is important to climb right beside the rope, in order to follow

the trail as well as to use it for helping in the ascent. The authorities ensure checks along the way. Some hours after leaving the guest accommodation when climbers arrive at the checkpoint at Sayat Sayat, climbers' registration and permit slip will be checked. After the descent, climbers go to the office and notify officials of their successfully completed climb.

Mount Kinabalu has attracted an increasing number of climbers. Table 1.1 shows the most current data by the statistics office of the Kinabalu National Park (2013). The statistic shows that the number of climbers on Mount Kinabalu has steadily increased from 39,298 in 2006 to 53,882 in 2012.

Table 1.1

Injured, Lost, Deceased and Total Number of Climbers from 2005 to 2012

Climbers	2005	2006	2007	2008	2009	2010	2011	2012
Total	43,154	39,298	40,390	47,848	47,564	47,613	51,602	53,882
Injured	25	23	33	36	24	27	31	34
Lost		1					1	
Dead	1			1	1			4

Source: Statistics office in Kinabalu National Park (2013)

Despite its reputation as the one of the easiest mountains to climb, the park records yearly fatalities and injuries. There were 34 injuries and 4 deaths in 2012. When compared to the number of deaths from 2005 to 2011, there were only three deaths in those seven years. From personal communication with the park authorities, many of the deaths resulted from not following the instructions from mountain guides of what to do and what not to do. Therefore, the importance of responsible mountaineering behaviour is vital for the safety of climbers. The next section reviews the background literature related to the study area.

1.4 Background of Study

In mountaineering tourism, safety and security are pertinent aspects in both the management of climbers and service providers. The climbers' behaviour largely determines the favourable or unfavourable outcomes of their activity. Using the Theory of Planned Behaviour (TPB) and Expectation Disconfirmation Theory (EDT), the current study examines the relationships between spirituality, personality, satisfaction, attitude towards behaviour, subjective norm, perceived behavioural control (PBC) with responsible behaviour and loyalty intention among climbers on Mount Kinabalu in Borneo. The TPB can be applied to predict leisure activities (Ajzen & Driver, 1992), to choose a travel destination (Joynathsing & Ramkissoon, 2010; Lam & Hsu, 2006), to predict behavioural intention (Ajzen, 1991; Cheng, Lam, & Hsu, 2005; Lam & Hsu, 2004; Lee & Gould, 2011; Liao, Chen, & Yen, 2007; Quintal, Lee, & Soutar, 2010; Wang & Ritchie, 2012), or to examine behaviour (Ong & Musa, 2011a; Valle, Rebelo, Reis, & Menezes, 2005). Ong and Musa (2011c) applied TPB to examine scuba divers' responsible underwater behaviour pertaining to diver safety and the protection of the marine environment. In the current study, TPB is used to predict the structural relation among the constructs which relate to the antecedents of responsible mountaineering behaviour.

TPB assumes that attitudes, subjective norms and perceived behavioural control influence behaviour intention. The behaviour intention subsequently influences the actual behaviour (Ajzen, 1985, 1991; Ajzen & Driver, 1992). So far, researchers have examined the influence of attitudes, subjective norms and perceived behavioural control directly on different behaviour like responsible underwater behaviour (Ong & Musa, 2011a) and recycling behaviour (Valle et al., 2005). The current study aims to investigate the influence of the TPB components directly on responsible mountaineering behaviour.

The TPB has been applied to explain and predict various kinds of behaviour. Some researchers (Han & Kim, 2010; Han & Ryu, 2012; Kaplanidou & Gibson, 2010; Lee, 2007) integrated a satisfaction component into the TPB and their findings showed that satisfaction can influence behaviour. Athanassopoulos et al. (2001) examined the influence of customer satisfaction on customer behavioural responses and reported that customer satisfaction directly affects the behavioural responses of customers. In addition, Tabernero and Hernández (2011) found that satisfaction can affect environmental responsible behaviour. Therefore, the current study considers the possibility that if tourists are satisfied with their Mount Kinabalu experience, they will display responsible behaviour in terms of safety and health.

Research has highlighted that satisfaction influences loyalty intention (Kim, Suh, & Eves, 2010; Matzler, Füller, & Faullant, 2007; Shonk & Chelladurai, 2008; Valle, Silva, Mendes, & Guerreiro, 2006; Yoon & Uysal, 2005; Yüksel & Yüksel, 2007). With regard to tourism study, tourist loyalty is indicated by the intention to revisit the destination and by the willingness to recommend the destination to friends and relatives (Valle et al., 2006). Thus, if tourists are satisfied with their experience on Mount Kinabalu they will likely revisit or recommend this destination and the activity to others.

Baker and Crompton (2000) believed that behavioural intention can influence loyalty whereas Han and Ryu (2012) claimed that the magnitude of specific motivational constructs like desire can affect loyalty intention. Therefore, it is probable that responsible behaviour in terms of safety and health can influence loyalty intention.

Sirch-Stasko (1996) believed that spirituality is recognized as an important part of human life, and could even maintain mental health. The concept of spiritual well-being was proposed by the National Interfaith Coalition on Aging (NICA). It is defined as ‘‘the

affirmation of life in a relationship with oneself (personal), others (communal), nature (environment), and God (or transcendental other)'' (Gomez & Fisher, 2003, p. 1976). Studies have investigated the relationship between spiritual well-being and ethical orientations in decision making (Fernando & Chowdhury, 2010) and the importance of relating with God (Fisher, 2012). Others have discovered spirituality as a motivator for tourists to travel to find their true self (Ambrož & Ovsenik, 2011) and as an orientation to understand the meaning and purpose of life (Finkelstein, West, Gobin, Finkelstein, & Wuerth, 2007).

Spirituality also predicts mental health (Arnette, Mascaro, Santana, Davis, & Kaslow, 2007). It has been examined in various populations including in pilgrims at mountain sites (Huntsinger & Fernández-Giménez, 2000) and university students (Fisher, 2002). The current study adds to the knowledge by examining the influence of spirituality among climbers on their responsible behaviour in terms of safety and health.

Phares (1991) defined personality as the sum of stable characteristics of a person such as feelings, thoughts, and behaviour that help to differentiate one person from another. McCrae and Costa (1985) introduced neuroticism, extraversion , openness to experience, agreeableness, and conscientiousness as the five personality traits that influence attitude. They claimed that these five factors exist in all personality instruments. People with different types of personality characteristics come to the mountain. Hence, it is important for the mountain guide to quickly observe the possible variation in personality, which could be detrimental to the climbers while climbing, so that proper guidance could be provided. Research in the marine environment has investigated the relationship between personality with responsible environmental behaviour among scuba divers (Musa, Seng, Thirumoorthi, & Abessi, 2011). The current study, explores the role of personality and attitude in influencing responsible mountaineering behaviour.

Socio-demographic variables play important roles in terms of future behaviour (Valle et al., 2006). Some researchers proposed that age, educational level (Woodside & Lysonski, 1989), nationality and occupation affect the travel destination decision process (Font, 2000). Therefore, in the current study socio-demographic factors which potentially influence climbers' behaviour are examined.

The study assumes TPB and its components (attitude towards behaviour, subjective norm and perceived behavioural control) influence responsible mountaineering behaviour. Mountains have also been recognised as spiritual locations with sacred power (Arave & Boren, 2012; Bernbaum & Gunnarson, 1990; Bron, 2001; Sharpley & Jepson, 2011). Climbers sometimes climb because of the spiritual feeling they experience when they reach the summit (Sharpley & Jepson, 2011). In this study, the researcher explores the influence of spirituality on responsible mountaineering behaviour. It also examines satisfaction and its relationship with loyalty intention in mountain environment using Expectation Disconfirmation Theory (EDT).

In summary, this study explores the role of spirituality, personality, satisfaction and the components of the TPB on mountaineers' attitude and behaviour. In addition, the dimensions of responsible mountaineering behaviour, attitude towards behaviour and norms are explored. With the help of EDT, the relationship between mountaineering's satisfaction and loyalty intention are investigated. Finally, an integrated model explaining the relationship between the introduced constructs and responsible behaviour among climbers is developed.

1.5 Problem Statement

The Ministry of Tourism, Culture and Environment of Sabah (2013) noted that the state is blessed with beautiful nature that could cater for different adventurous activities such as

mountain climbing and scuba diving. The Kinabalu National Park attracted 2,875,761 tourists in 2012 a number considerably higher than 201,807 in 2006 (2013). Although the number of climbers has been limited by the park authority to prevent over-crowding (Ching, 2008), the statistics office at Kinabalu National Park (2013) reported that the number of climbers steadily increased from 39,298 in 2006 to 53,882 in 2012.

Simply looking at the increased number of climbers, a simultaneous rise in death and injury can be inferred (Windsor et al., 2009). This association is simply because mountaineering is an adventurous sport (Hall & Weiler, 1992; Hudson, 2003; Pomfret, 2006), where climbers continuously challenge themselves with risk and danger. It is therefore clear that the role of responsible behaviours, those which directly impact on safety and health, cannot be underestimated in this environment (Beedie & Hudson, 2003; Pomfret, 2006). Hence, the main research question for this study is which factors can influence responsible mountaineering behaviour? This general question is further divided into: Can personality traits affect responsible behaviour? Can mountaineering satisfaction influence responsible behaviour among climbers? Does satisfaction influence loyalty intention? Can attitude towards behaviour together with increased knowledge, awareness and commitment among climbers influence the responsible behaviour of climbers? Can factors of subjective norm, media norm and perceive behavioural control predict and explain responsible mountaineering behaviour? And finally, can the level of climbers' spirituality influence responsible mountaineering behaviour as well as their attitudes towards behaviour?

To answer these questions the current study integrates constructs from TPB and EDT and adds personal factors of personality and spirituality to further enrich the understanding of responsible behaviour among climbers. Based on the literature review and the two stated theories (TPB and EDT), a predictive model of responsible mountaineering behaviour is

formulated. This model serves as a framework of the direct and indirect relationships between the proposed constructs.

1.6 Research questions

There are five research questions to this research. These are:

1. Do factors of attitudes, spirituality, norms, and PBC have significant influences on responsible behaviour in the mountain?
2. Do satisfaction and responsible behaviour have significant influences on loyalty intention?
3. Does personality have significant influences on satisfaction and attitudes?
4. Does attitude significantly mediate the relationship between spirituality and responsible behaviour?
5. Does responsible behaviour significantly mediate the relationship between satisfaction and loyalty intention?

1.7 Research Objectives

There are five objectives of this study. These are:

1. To examine the influence of attitudes, spirituality, norms, and PBC on responsible behaviour in the mountain.
2. To identify the influence of satisfaction and responsible behaviour on loyalty intention.
3. To examine the influence of personality on satisfaction and attitude.
4. To test the mediating role of attitude in the relationship between spirituality and responsible behaviour.

5. To test the mediating role of responsible behaviour in the relationship between satisfaction and loyalty intention.

1.8 Significance of the Study

The current study provides significant theoretical and practical contributions:

1.8.1 Theoretical contributions

The application of TPB has been proposed in various behavioural studies. For example, in choosing a travel destination (Lam & Hsu, 2006), purchasing behaviour (De Cannière, De Pelsmacker, & Geuens, 2009), revisiting a green hotel (Han & Kim, 2010), understanding leisure activities (Ajzen & Driver, 1992) and using e-service (Liao et al., 2007). Although the TPB application to investigate responsible underwater behaviour among divers was examined (Ong & Musa, 2011a, 2011c), limited studies have combined both TPB and EDT in examining consumer behaviour, and to the researcher's knowledge, none has been carried out in the context of responsible mountaineering behaviour. As stated earlier the researcher also added personality and spirituality to the research model to develop a new comprehensive model in predicting responsible mountaineering behaviour. The mountaineering responsible behaviour model itself is the main theoretical contribution of this study. Within, the model, it also examines the mediating role of two constructs: firstly, the mediating role of attitude on the relationship between spirituality and responsible mountaineering behaviour; and secondly, the mediating role of responsible behaviour on the relationship between satisfaction and loyalty intention.

The study's other theoretical contribution is the exploration of the responsible mountaineering behaviour dimensions. These dimensions have never been examined by

previous studies in relation to mountaineering. Consequently, the new instrument is suggested to measure responsible mountaineering behaviour. The influence of subjective norms has many times been evaluated as a component of TPB on behaviour. However, the influence of media norms is yet to be examined in the context of responsible mountaineering behaviour. This is another theoretical contribution to this study. Ultimately, the study is completed by proposing the mountaineering responsible behaviour model using structural equation modelling which provides a comprehensive picture of the dynamic influence of all the research constructs' role in influencing responsible mountaineering behaviour.

1.8.2 Practical contribution

The study findings may assist in the content provision of mountaineering education to better understand the possible antecedents of responsible mountaineering behaviour. Effective and appropriate educational programmes could be instituted for safety and health improvements among prospective climbers, especially on Mount Kinabalu. The park authority could also formulate relevant strategies and policies which will benefit both the tourists and the industry, in providing excellent facilities and services, and enhance both the experience and safety of the climbers.

The study findings are pertinent knowledge for the development of marketing plan and marketing communication of Mount Kinabalu National Park. Satisfaction indicates the quality of experience on Mount Kinabalu, providing testimony for prospective climbers, facilitating their decision making process, of whether to embark on this adventurous activity. The experience quality could be further highlighted by the knowledge of repeat visitors and loyalty intention. Even though it is not the main objective of this study, information on

demographic profiles and their tabulation with other dimensions or constructs could be used for marketing segmentation.

1.9 Definition of Terms

Climber

There are different terms to describe activities in the mountain, such as mountain hiking, hill walking, mountaineering and mountain climbing. Muhar, Schauppenlehner, Brandenburg and Arnberger (2007) believed that there are not valid definitions for them and it is impossible to separate these terms as there are overlaps. In mountain hiking, there is usually no need to use hands or any specific equipment but in mountaineering, hands and technical equipment such as ropes, ice axes and torchlight are used (Muhar et al., 2007; Wöran & Arnberger, 2012). In the current study, climbers refer to trekkers and tourists who climb Mount Kinabalu.

Spirituality

Researchers have introduced different definitions of spirituality. For example, Vaughan (1991) defined spirituality as "a subjective experience of the sacred" (p. 105) whereas Fisher (2011) stated that "spirituality helps individuals to live at peace with themselves, to love God and their neighbours, and to live in harmony with the environment" (p. 20). Others (Gomez & Fisher, 2003; Meezenbroek et al., 2012) understood spirituality in terms of universal human experience and defined it as connectedness or relatedness. In the current study, the definition of spirituality is based on the concept of Spiritual Well Being (SWB) which was developed by Fisher (2010). He introduced the acronym SHALOM that is made up of two

components - Spiritual Health Measure (SHM) that asks people about their living experience, and Life Orientation Measure (LOM) that states ideals for spiritual health. SHALOM recognises the quality of relationship between every person with self (personal well-being), others (communal well-being), the environment (environmental well-being) and God (transcendental well-being) as essential components of spiritual well-being.

Personality

Phares (1991) defined personality as permanent traits in a person that occur as feelings, behaviour and thoughts which can help to differentiate one person from another. Mischel and Soda (1998) proposed that personality can be thought of as a signature, like a thumbprint, that distinguishes individual traits. In the current study, personality is defined within the Five Factor Model by McCrae and Costa (1985).

In this model personality consists of five basic dimensions: neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. Neuroticism represents a lack of psychological adjustment. People who are highly neurotic are often worried, fearful, sad, embarrassed, distrustful, and have difficulty in managing stress. Extraversion demonstrates sociability, cheerfulness and optimism. An extrovert is recognized as a friendly person who is fun-loving, amiable, sociable, exciting, unafraid of risk, and acts on impulse. Individuals who are characterised by openness to experience display traits like independence, curiosity to explore new ideas, creativity and appreciation of the arts. Agreeableness is characterized by traits like good-natured, forgiving, trustworthy and cooperative. People who score high on agreeableness often help others and expect help in return. Finally, conscientiousness means the tendency to be hardworking, self-disciplined, strong-willed, deliberate, and

reliable. Therefore people with this trait appear to be more active in planning, organizing, and care (McElroy, Hendrickson, Townsend, & DeMarie, 2007).

Attitude towards Behaviour

An attitude is a favourable or unfavourable predisposition towards a specific behaviour or an object (Lam & Hsu, 2006). Zanna and Rempel (1988) found attitudes to be related to feelings, beliefs and past behaviour towards an object. These three items refer to the cognitive, affective and conative components of attitude. The cognitive component includes knowledge, personal thoughts and ideas. The affective component consists of feelings and beliefs about certain things and issues. The conative component consists of the behaviour of the individual towards an object (Maloney, Ward, & Braucht, 1975). In the current study, attitude towards responsible mountaineering behaviour is proposed based on these components (cognitive, affective and conative).

Subjective Norms

Ajzen (1991) defined a subjective norm as a social factor that "refers to the perceived social pressure to perform or not to perform a behaviour" (p.188). In the tourism context, "if the individual perceives that his or her family, friends or members living in the community encourage such support for tourism, he or she will be more willing to support such development" (Nunkoo & Ramkissoon, 2010, p. 530). For the purpose of this study, subjective norms refer to the mountaineering partner/group members, other climbers, family members and mountain guides that influence individuals in terms of how they should behave. In addition, the current study extends the concept of norms into media norms. Media norms

means the influence of media like websites, social media and books/magazines related to mountaineering activity.

Perceived Behavioural Control

Perceived behavioural control (PBC) refers to the degree of perceived ease or difficulty in performing the behaviour (Ajzen, 1991; Ajzen & Driver, 1992). PBC plays an important role in the TPB. In fact, it differentiates between TPB and the theory of reasoned action. For the current study, PBC generally means the level of difficulty in performing the responsible mountaineering behaviour with regard to safety and health at Mount Kinabalu.

Responsible Mountaineering Behaviour

Bear, Manning and Izard (2003) believed that "responsible behaviour entails self-motivation and self-guidance, and not obedience and compliance to rules merely in response to external supervision, rewards, and punishment" (p. 140). Spenceley et al. (2002) defined responsible tourism as "providing best holiday experiences for guests and good business opportunities to enjoy better quality of life through increased socioeconomic benefits and improved natural resource management" (p. 8). Ong and Musa (2011b) defined scuba diving responsible behaviour as "specific responsible behaviour that needs to be carried out underwater in order to ensure divers' safety as well as for the protection of marine environment" (p. 20). For this study the researcher adapted Ong and Musa (2011b)'s definition, to define responsible mountaineering behaviour as specific behaviour that needs to be carried out by climbers to ensure their safety and security while mountain climbing.

Satisfaction

There are many definitions of satisfaction. Hunt (1977) defined satisfaction as "an evaluation of an emotion" (p. 459). Cadotte et al. (1987) defined satisfaction as the feeling after the assessment of the use of a service or product (p. 305). Yoon and Uysal (2005) believed that satisfaction is important for successful destination marketing as it will impact on the likelihood of a revisit. In the current study, the definition of satisfaction is adapted from Oliver's (1999), which is an assessment of the difference between previous expectations and the actual performance of the product or services.

Loyalty intention

Loyalty means a repeat purchase of a product or service, or the recommendation of products and services to others. In tourism research, destination loyalty is a central construct because it refers to the destination revisit of tourists and to the destination recommendation to others (Yoon & Uysal, 2005). For the purpose of this study loyalty intention refers to the tourists' intention to come again to Mount Kinabalu, recommend Mount Kinabalu to others, encourage others to climb Mount Kinabalu and share experiences of climbing this mountain with others.

1.10 Organization of the Thesis

The study consists of five chapters. Chapter 1 presents background information of the study and the problem statement. Research objectives are introduced and relevant terms defined.

Chapter 2 introduces the study constructs. Relevant theories that may predict responsible mountaineering behaviour and other constructs that influence the behaviours are presented.

Chapter 3 describes in detail the methodology used in this study. This includes information about the pilot study, data collection procedures, and the statistical analysis.

Chapter 4 reports the results of the study, including all the tested hypotheses.

Chapter 5 serves as a reflective chapter. Study results will be compared with some of the previous studies in the literature review. Before making the final conclusion, the researcher discusses the study's theoretical, managerial and marketing contributions; together with short discussions on the study limitations and suggestion of future studies.

1.11 Summary

This chapter has described an overview of mountaineering tourism in Mount Kinabalu. The concern for health and safety during mountaineering has brought focus into responsible behaviour and other factors which may influence responsible mountaineering behaviour. The background of the study highlighted two theories (TPB and EDT) used to explore factors which influence responsible behaviour on the mountain. The chapter identifies the problem statement, research objectives, significance of the study as well as the theoretical and practical contributions. Definition of the specific terms and organisation of the thesis is given. The relevant literature will be explained in the following chapter.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Mountains have always attracted people to climb them, making mountaineering a popular activity world-wide. The activity provides health benefits, connection with nature and adventure (Maroudas, Kyriakaki, & Gouvis, 2004; Nepal & Chipeniuk, 2005; Pomfret, 2006). Many climbers believe that mountaineering not only strengthens the body but also makes the soul joyful (Gyimóthy & Mykletun, 2004). This reinforcement of body and soul enables man to cope with the many hardships of life (Burnik, Jug, Kajtna, & Tušak, 2009).

Many believe that mountains are destinations which provide spiritual access and sacred power to people (Arave & Boren, 2012; Bernbaum & Gunnarson, 1990; Bron, 2001; Sharpley & Jepson, 2011). Mountains around the world like Olympus in Greece, Tai Shan in China, Kailas in Tibet, Fuji in Japan, Zion and Sinai in the Middle East, Everest in Nepal and Kinabalu in Borneo are regarded as sacred. Sharpley and Jepson (2011) stated that even non-religious believers feel something spiritual on the summits of these mountains. In various cultures mountains represent calmness, majesty, stability and greatness (Bron, 2001).

Despite the spiritual values and connections of mountains to humans, the climb itself, especially in high altitude environments poses risks and danger to climbers (Musa et al., 2004). Therefore, applying safety principles and bringing along necessary equipment during mountaineering is the responsibility of climbers (Burnik et al., 2009; Maroudas et al., 2004). Evidence shows that the relationship between spirituality and God is always presented as a way to remain safe from danger (Sharpley & Jepson, 2011) and enhance coping behaviour (Zwingmann, Klein, & Büssing, 2011) as mountaineering is filled with risk and danger (Hall & Weiler, 1992).

2.2 Responsible Mountaineering Behaviour

Being close to natural attractions is an important travel reason for many tourists. Mountains are commonly recognised as recreational places and therefore attract all types of tourists (Nepal & Chipeniuk, 2005). Beautiful mountains with spectacular scenery are of particular interest to tourists who want to participate in mountaineering. Planning and organising trips involve many factors such as identification of the mountain, the physical activity level of the climber, understanding etiquette on the mountain and awareness of dangers faced by climbers (Nepal, 2002).

Climbers, especially in high altitude environments constantly face risk and danger (Ewert, 1994; Musa et al., 2004). The increasing number of climbers has led to an escalating number of injuries during climbing. Monasterio (2005) believed that mountaineering has been recognised as a high risk sport which can lead to physical injuries and fatalities. Therefore, it is essential to take a closer look at responsible mountaineering behaviour. Adopting safety principles and bringing along the necessary equipment for the climb are the responsibility of climbers (Burnik et al., 2009; Maroudas et al., 2004).

According to Pomfret (2011) "Aside from being a type of adventure tourism, mountaineering is a form of nature-based tourism which involves trekking up mountains, and ice- and rock-climbing in mountainous regions around the world" (p. 5). The latent danger in the mountains has made mountaineering a risky sport. Although climbers get many benefits, such as a sense of well-being (Pomfret, 2011), develop skills, overcome physical and mental challenges (Pomfret, 2006) and refresh the spirit (Johnston & Edwards, 1994), climbers also face challenges such as exhaustion, altitude sickness, frostbite, snow blindness and avalanches (Loewenstein, 1999). An important aspect in overcoming these challenges is responsible behaviour by all climbers in the group.

One of the major concerns for climbers is to have a safe mountaineering experience (Pomfret, 2011). The risk and danger involved in mountaineering makes it an adventure sport and one of the main growth areas in adventure tourism because it includes all the core elements of adventure. These elements are uncertain outcomes, danger and risk, challenge, anticipated rewards, novelty, stimulation and excitement, escapism and separation, exploration and discovery, absorption and focus and contrasting emotions (Swarbrooke, Beard, Leckie, & Pomfret, 2003). Risk and danger are two inherent element which could be detrimental to the climbers if the elements are appropriately managed.

Adventure tourism has been recognized as "one of the newest and fastest growing sectors of the tourism industry" (Ewert & Jamieson, 2003, p. 81). Muller and Cleaver (2000) believed that "Adventure tourism is characterized by its ability to provide the tourist with relatively high levels of sensory stimulation, usually achieved by including physically challenging experiential components"(p. 156).

Over the years, the nature of mountaineering is changing (Pomfret, 2006). As mountain adventure tourism extends beyond its traditional activities (walking and climbing), mountaineering has been more fragmented and mixed with tourism (Beedie & Hudson, 2003). Mountaineering could be both soft and hard adventure tourism (Pomfret, 2006). Soft types of mountaineering tourism utilize guides and there is minimal level of real risk. This includes introductory mountaineering training courses or guided trekking holidays. On the other hand, "hard adventure refers to activities with high level of risk, requiring intense commitment and adventure skill" (Hill, 1995, p. 63). Examples of hard types of mountaineering tourism are rock climbing, strenuous treks and mountaineering expeditions (Pomfret, 2006). The safety of climbers need to be considered in both soft and hard types of mountaineering although soft types of mountaineering pose less risk and danger.

Adventure tourism activities, in particular high intensity physically demanding and thrilling activities like mountaineering, can bring about a wide range of strong emotional reactions while taking part. It is due to the experience of strong emotions such as excitement, fear, the thrill of danger and so on that outdoor adventure tourism has blossomed into a booming industry. According to Pomfret (2006) it is risk and fear that seem to be the emotions that are most likely to attract participants to mountaineering. Because of this, thrill-seeking types of persons, hungry to experience risk and fear in a positive way are likely to look for satisfaction in sports such as climbing.

However, with regard to mountaineering, it is not quite the same as many other outdoor adventure activities since the risks associated with it are not so easily managed compared to them. Factors such as types of weather conditions and sudden changes in them, the nature of the terrain being traversed, the fitness level of those attempting to climb as well as the climbers' determination and motivation all play a part and interplay with how potential risks can be handled.

In this context, high risk is understood to be related to issues such as crossing hazardous or unstable surfaces, often in unpredictable weather conditions or in circumstances where climbers are not as confident or competent in their skills, possibly leading to the threat of injuries or fatalities. These types of unwelcome outcomes are connected to high-intensity mountaineering activities. Mental and physical breakdown along with death amongst the mountaineering cohort of sports enthusiasts is quite high and this may be seen in the associated rate of injuries running at 50% of those taking part and a rate of 8.5% mortality in a recent four-year follow-up study (Monasterio, 2005).

Some climbers may wish to challenge themselves and test their physical and mental limits and may see mountaineering as one of the ways in which to do so. Climbs that are deemed to be typically more demanding may attract persons with these personality attributes. Arising from this, Ewert and Sibthorp (2014) noticed that persons demonstrating these characteristics who go on to explore the possibility of satisfying these needs, often seek to discover the following:

- How much time and commitment are involved in learning the skills needed to partake in this sport?
- How much is necessary to learn about tools and equipment that might need to be used in specific climbs?
- Is there likely to be a need for extra learning and practice runs to take part in a climb?
- Whether joining a group with a skilled instructor or the possibility of using a guide might be better?
- Is there a special need for strong fitness levels and determination and motivation associated with this climb?

These issues also connect to how climbing activities may be managed and regulated. The research noted above infers that prospective climbers are most likely to seek out climbs that are matched to their skill sets, including fitness level and mental stamina. On this basis, those offering and managing mountaineering opportunities must consider the implication of the inner motives of potential visitors to their tourism attraction. Questions regarding how to manage risk level may need to be put. In some cases it may be possible to offer varying increasing levels of risk. In some cases there may even naturally be too much risk and this may need to be managed. Ethical concerns connected to mountaineering may often arise. In

a recent incident on Mount Everest 16 Sherpas died following an avalanche and the ensuing media attention highlighted the conditions and treatment some Sherpas claimed they had experienced at the hands of the climbers they accompanied. A climber's personal motivations for attempting a particular climb has wider implications than just for that individual climber. Swarbrooke, Beard, Leckie and Pomfret (2003) illustrated that attraction to risk, just like other motivating factors, can involve a range of issues concerning not just the climber but everyone else associated with him or her. This would include persons not directly associated but who may become potentially involved such as guides and rescue teams. The impact created by the drive to take part in high risk activities may possibly impact on more than just the participant.

Brymer, Downey and Gray (2009) has previously focused on the inherent nature of the attraction of danger and risk associated with adventure sports and mountaineering. In most cases climbers are unlikely to seek out danger purposefully because of a lack of it elsewhere in their lives. Rather it can be considered that ordinary daily activities that may be taken for granted, such as driving, may be deemed to be more risky than climbing. Experienced climbers take into account that this activity involves managed risk in just the same way as many other activities, even that of driving. However, mountaineering will be safer through using technology or and equipment such as ladders, various pitons and fixed lines. The technology can decrease the risks and dangers during mountaineering and make the mountain safer and easier to climb (Ewert, 1985).

Several declarations like the Kathamandu Declaration and Tyrol Declaration state that safety and health issues among climbers as main concerns in the mountain environment to minimize the number of injuries in the mountains. For example, climbers should be tolerant, help each other, pay attention to their skills and equipment to commensurate with

their mountaineering goals, and accept risks and responsibility (Hamilton & McMillan, 2004; Pomfret, 2006). In this study, safety and security information from the Kinabalu National Park guided the list of responsible behaviours required such as carrying enough warm clothes, drinking enough water, informing the mountain guide if the climber is faced with any health problems and carrying a rain coat, climbing shoes, torch light to make a safe environment for climbers, among others.

Bear, Manning and Izard (2003) believed that "responsible behaviour entails self-motivation and self-guidance, and not obedience and compliance to rules merely in response to external supervision, rewards, and punishment" (p. 140). Spenceley et al. (2002) defined responsible tourism as "providing best holiday experiences for guests and good business opportunities to enjoy better life quality through increased socioeconomic benefits and improved natural resource management" (p. 8). Moreover, Stanford (2006) believed that responsible tourism is a good way to minimise the negative and maximise the positive impact of tourism.

Responsible behaviour needs to be observed in dangerous places and high risk destinations (Burnik et al., 2009; Maroudas et al., 2004). Although many researchers have investigated environmental responsible behaviour (Bamberg & Möser, 2007; Cottrell, 2003; Cottrell & Graefe, 1997; De Young, 2002; Ong & Musa, 2011a; Osbaldiston & Sheldon, 2003), limited research has been conducted on responsible mountaineering behaviour especially in terms of safety and health. Since mountaineering is an adventure sport (Hall & Weiler, 1992; Hudson, 2003; Pomfret, 2006) which is commonly associated with risk and danger (Beedie & Hudson, 2003; Gyimóthy & Mykletun, 2004; Maroudas et al., 2004), responsible behaviour is crucial among climbers (Burnik et al., 2009) and plays an essential role in maintaining safety and health. Mountaineering, especially in high altitude destinations

(2,500 m and above), entails risk and danger and climbers need to adopt responsible behaviour to maintain their own health and safety (Musa et al., 2004; Pollard & Murdoch, 2003). In fact Musa et al. (2004) proposed that health and safety issues should be a pertinent part of sustainable tourism management in Sagarmatha National Park.

Hungerford and Volk (1990) researched into responsible environmental behaviour in the field of environmental education. They believed that if students learnt something, behaviour can be modified. In addition, "if environmental issues are to become an integral part of instruction designed to change behaviour, instruction must go beyond an awareness or knowledge of issues. Students must be given the opportunity to develop the sense of ownership and empowerment so that they are fully invested in an environmental sense and prompted to become responsible, active citizens" (p. 276).

Lee (2011) suggested that recreation involvement, place attachment and conservation commitment impact on environmentally responsible behaviour. Ong and Musa (2011c) investigated the relationship between specific scuba diving attitude and general environmental attitude with responsible behaviour among scuba divers. They found that responsible scuba diving underwater behaviour has a direct relationship with specific scuba diving attitude and environmental concern. Moreover, the cognitive and conative dimensions of attitude were strongly related to skill and safe diving behaviour. In addition, Musa, Seng, Thirumoorthi and Abessi (2011) explored the influence of personality, experience and demographic profile on responsible underwater behaviour. They found that divers with high neuroticism were more irresponsible underwater. On the other hand, divers with high agreeableness were more likely to be responsible.

De Young (2002) proposed a strategy called intrinsic satisfaction as a particular form of motivation and examined this strategy for promoting environmentally responsible

behaviour. He found that environmentally responsible behaviour requires an understanding of the great diversity of people's motives and there is no single motive for promoting environmental responsible behaviour. Furthermore, Kim, Airey and Szivas (2011) explored a multiple assessment approach to investigate influence of interpretation experience on different types of behavioural change and how different visitor groups change particular behaviours and attitudes. They highlighted that effectiveness of interpretation fostered awareness and support of visitors for management policies. Suwa, Yamamoto, Okada and Ohta (2006) believed that even though people are aware of the problem, it does not follow that they do anything about it. Suwa et al. (2006) defined social dilemma as "the social situation to must be selected cooperative behaviour that decreased short-term individual profit and increased long-term social profit, or detective behaviour that increased short-term individual profit and decreased long-term social profit" (p. 2). They tested their hypothesis by comparing a social dilemma programme with an enlightenment program. They indicated that a social dilemma education program can promote responsible behaviour better than enlightenment education program.

In a meta-analysis of psycho-social determinants of pro-environmental behaviour, Bamberg and Moser (2007) concluded that environmental behaviour has two important views: the self-interest view (e.g. one's own health risk) and the pro-social view (e.g. concern for others and ecosystems). Researchers who view the pro-social motive as environmental behaviour tend to use norm-activation theory as the theoretical framework, whereas researchers who view environmental behaviour as self-interest behaviour prefer adopting the rational choice framework like the TPB. In the current study, responsible behaviour was gauged in terms of minimising health risk and increasing safety in the mountain environment.

Taking the self-interest view, the TPB was adopted as the theoretical framework for this study. The next section discusses this theory in detail.

2.3 The Theory of Planned Behaviour

Researchers have used various theories to explain or predict human behaviour. These include Theory of Reasoned Action (TRA, Fishbein & Ajzen, 1975), Norm-Activation Model (NAM, Schwartz, 1977; Schwartz & Howard, 1981) and Value-Belief-Norm Theory (VBN, Stern, 2000). Ajzen (1985) proposed the TPB which is the advancement of the TRA (Fishbein & Ajzen, 1975) to explain and predict human behaviour through an individual's intention to perform a behaviour. Intention is determined by three predictors – attitude towards behaviour, subjective norm and perceived behavioural control. The TPB removes TRA limitations with regards to behaviours that people can control over volitional behaviour (Ajzen, 1991). The difference between TPB and TRA is the presence of perceived behavioural control in the former. Ajzen adapted perceived behavioural control from Bandura's systematic research (Bandura, Adams, & Beyer, 1977). Bandura's studies highlighted that confidence or self-efficacy in performing the behaviour can strongly influence a person's behaviour (Ajzen, 1991). The TPB places the construct of perceived behavioural control or self-efficacy in relationship among beliefs, attitudes, intentions and behaviour within a general framework (Ajzen, 1991).

The TPB consists of three independent conceptual factors of intention (Ajzen, 1985). The first factor is the attitude towards behaviour which relates to whether a person is in favour of performing a specific behaviour. The second factor is a social factor named as subjective norm which measures how much a person senses social pressure to perform or not to perform the behaviour. The third factor is the perceived behavioural control which refers to the ease

and the difficulty involved in performing the behaviour (Ajzen, 1985) Figure 2.1 shows the TPB pictorically. The following section discusses these three factors.

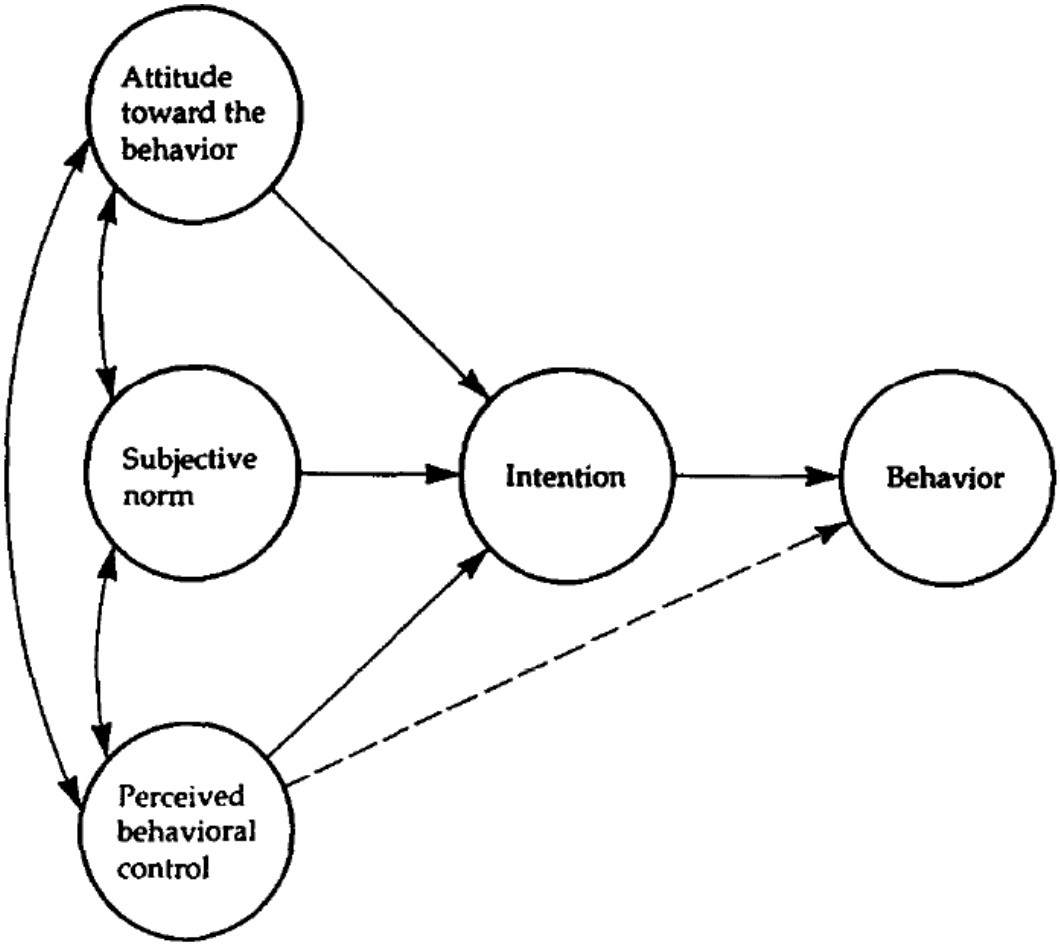


Figure 2.1. Theory of Planned Behaviour (Ajzen, 1991)

One of the most important factors in the TPB is the individual's intention to perform the behaviour (Ajzen, 1985, 1991; Ajzen & Driver, 1992). Intentions are indicators which reveal how much people are willing to try or plan to perform the behaviour (Ajzen, 1991). According to the TPB, behaviour intention and perceived behavioural control can both be linked directly to predict behaviour. This means that if behavioural intention is kept constant, perceived behavioural control can directly influence the behaviour. For example, if two

people have equal intentions to learn skiing and try to do it, the person who has confidence to master the activity is more likely to succeed compared to the other person who doubts his/her ability (Ajzen, 1985, 1991).

There is no doubt that there is a strong relationship between behaviour intention and the actual performance of the behaviour (Lam & Hsu, 2006; Liao et al., 2007; Wang & Ritchie, 2012). Therefore, many researchers directly measure the influence of attitude, subjective norms and perceived behaviour control on the behaviour itself (Ong & Musa, 2011a; Oreg & Katz-Gerro, 2006; Valle et al., 2006). Ajzen (1991) believed that TPB is a useful theory to explain leisure activities such as skiing, swimming, horse-back riding, or mountain climbing. Many researchers apply the TPB in various studies of tourism research (Ajzen & Driver, 1992; Chancellor, 2012; Chien, Yen, & Hoang, 2012; Goh, 2014; Han, Lee, & Lee, 2011; Hsu & Huang, 2012; Hsu, 2012; Jalilvand & Samiei, 2012; Lam & Hsu, 2006; Quintal et al., 2010; Xie, Zhang, & Lu, 2008; Yamada, Heo, & Hji-Avgoustis, 2014).

Liao, Chen and Yen (2007) applied an integrated model to predict and explain behaviour of using online services with TPB and EDT. The finding showed that customer satisfaction, perceived usefulness and subjective norm are the main determinants of behavioural intention for customers to use e-service. Armitage and Conner (2001) highlighted that intentions and self-predictions are better predictors of behaviour and they believed that the subjective norm is a weak predictor of intention. Cheng, Lam and Hsu (2005) tested the sufficiency of both the TPB and the extended TPB (which added past behaviour). They argued that the original TPB has strong power, whereas the new model with past behaviour does not significantly improve the behaviour predictability.

Lam and Hsu (2004) applied the TPB for travellers' behavioural intention in choosing a travel place. The results demonstrated that attitude, PBC and past behaviour are related to

respondents' travel intention. Using TPB, Perugini and Bagozzi (2001) investigated the role of desire and anticipated emotions in influencing goal directed behaviour. The findings showed that desire fully mediates the influence of attitude towards behaviour, subjective norm, PBC and anticipated emotions on intentions. Ong and Musa (2011a) investigated the relationship between attitude, PBC, subjective norm and personal norm with responsible underwater behaviour based on the TPB and norm action theory among scuba divers. The findings supported the TPB as a basis to explain the responsible behaviour of divers. Attitude and personal norm were highlighted as important factors in influencing pro-environmental behaviour.

De Cannière, De Pelsmacker and Geuens (2009) compared the TPB and the Relationship Quality model (RQ) in purchase behaviour. Components of the TPB (attitude towards the buying behaviour, subjective norm and PBC) were better predictors of behavioural intention than components of the RQ model (trust, commitment and satisfaction). Joynathsing and Ramkissoon (2010) applied the TPB and push and pull theories in their study about the behavioural intention of European tourists. Results demonstrated that attitude and subjective norm influence behavioural intention but PBC does not have significant influence on behavioural intention.

Blue (1995) reviewed the predictive capacity of the TPB and theory of reasoned action in exercise research. The findings demonstrated that the TPB creates a useful framework in the study about exercise because this theory includes beliefs which can control factors that inhibit or facilitate the performing of exercise.

2.3.1 Attitude towards the Behaviour

Ajzen (2001) highlighted that attitude can be an essential focus of research and theories in social and behavioural sciences and believed that it relates to understanding and predicting social behaviour. Researchers have proposed several definitions of attitude. Ajzen (2001) recognised attitude as "a summary evaluation of a psychological object captured in such attribute dimensions as good-bad, harmful-beneficial, pleasant-unpleasant, and likable-dislikeable" (p. 28). Eagly and Chaiken (1993) defined attitude as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour" (p. 582). Bohner and Dickel (2011) defined attitude as "an evaluation of an object of thought" (p. 392). Zanna and Rempel (1988) revealed that attitude relates to the feeling, belief and past behaviour toward an object. People who have a positive attitude towards an object will have favourable beliefs, feeling and behaviours toward it. On the other hand, people who have a negative attitude towards an object will have unfavourable beliefs, feeling and behaviours toward it (Ong & Musa, 2011a).

There are three dimensions of attitude: cognitive (knowledge and beliefs), affective (feelings and emotions), and conative (intentions and behaviour) (Best, 2010; Braun, 2012; Eagly & Chaiken, 2007; Han, Kim, & Kim, 2011; Hines, Hungerford, & Tomera, 1987; Maloney & Ward, 1973; Maloney et al., 1975). The cognitive dimension refers to the knowledge facet of an attitude whereas the affective dimension refers to beliefs and feelings about specific issues. Actions or behavioural tendencies of an individual toward an object form the conative dimension.

Researchers may measure attitude directly by self-report or indirectly by observation (Krosnick, Judd, & Wittenbrink, 2005; Schwarz & Bohner, 2001). In direct self-report, researchers use a questionnaire to ask respondents to clarify their attitudes, as people can

report their attitudes accurately (Bohner & Dickel, 2011). This method is an explicit attitude measurement. However, some researchers believe that attitude is a latent construct and people probably try to conceal their attitude to represent themselves positively. According to Krosnick et al. (2005) attitude cannot be directly measured. Researchers normally measure implicit attitude with observation techniques to categorise stimuli that demonstrate an attitude to objects in respondents (Bohner & Dickel, 2011). In a meta-analysis review of 122 research reports, Greenwald et al. (2009) found that both explicit and implicit measures significantly correlated with each other. The research by Sundstrom et al. (1996) which investigated the relationship between people and physical environments over six years proposes that subjective measures (like attitudes and cognitions about the environment) are preferable to objective measures (like direct measures or manipulations of the objective). Studies usually utilise self-report instead of implicit methods to measure attitude.

2.3.2 Subjective Norms

Ajzen (1991) defined subjective norm as a social factor that "refers to the perceived social pressure to perform or not to perform a behaviour" (p. 188). Armitage and Conner (2001) highlighted that "if an individual perceives that significant others endorse (or disapprove of) the behaviour, they are more (or less) likely to intend to perform it" (p. 474). Therefore, if the individual finds that people who are important to him or her (subjective norms) would encourage the behaviour, he or she will be more willing to engage in the behaviour (Nunkoo & Ramkissoon, 2010). Some researchers believe that subjective norm is not a component of the TPB, and should be removed from the analysis, as it would not be able to predict intention (Sparks, Shepherd, & Frewer, 1995). However, there is evidence that subjective norms can independently affect intentions (Armitage & Conner, 2001). In the tourism context,

subjective norms relate to individuals who would be more willing to support tourism development if their partners, friends or family members encourage such support of tourism (Nunkoo & Ramkissoon, 2010).

In addition, influence of media on human behaviour is gaining importance and cannot be ignored (Kaplan & Haenlein, 2010; Zhang, Johnson, Seltzer, & Bichard, 2010). Xiang and Gretzel (2010) believed that social media such as Facebook, Twitter, YouTube, blogs as well as websites and magazines play an important role in providing travel information for tourists. They reported that social media has a growing importance in online tourism domain and also indicated that information from social media is challenged by traditional travel-related information. According to Zeng and Gerritsen (2014), social media play an important role in many aspects of tourism such as information search and decision making, tourism promotion and interacting with consumers. They mentioned that research on social media in tourism is still new and more research was needed in this area.

There is limited research on the influence of subjective norms in the TPB on mountaineering behaviour. In the current study, subjective norms refer to a mountaineering partner or group member, other climbers, family members and mountain guides that might influence the behaviour of climbers in the mountain. The current study also extends the norms to include media norms to capture the influence of social media, mountaineering websites and magazines, and information from destination specific websites, all of which may affect mountaineering behaviour.

2.3.3 Perceived Behavioural Control

Perceived behavioural control (PBC) signifies people's conception of the ease or difficulty in carrying out the behaviour of interest (Ajzen, 1991; Ajzen & Driver, 1992). Bandura,

Adams and Beyer (1977) discovered that people's confidence or self-efficacy strongly affect their capability to perform it. Therefore, according to the TPB, PBC has direct influence on behavioural achievement (Ajzen, 1991). Cho (2008) noted that PBC indicates "one's perceptions of the availability of the skills, resources (time and money), and opportunities that may either inhibit or facilitate a behaviour" (p. 221). Thus, both external constraints (e.g. opportunities and facilities) and internal controls (e.g. ability to performing and skills) are necessary in performing a specific behaviour (Cho, 2008). Ajzen and Driver (1992) proposed that PBC reflects perceived ease or difficulty in performing the behaviour and it refers to past experience as well as anticipated impediments and obstacles.

A number of studies have used the TPB as a conceptual framework to predict and understand a particular behaviour in various activities. For example, Ajzen (1991) believed that TPB is a useful theory to explain leisure activities such as skiing, swimming, horse-back riding, or mountain climbing. Intentions for performing these activities can be predicted from the attitude towards behaviour, subjective norms and perceived behavioural control with regard to the activities; intentions and behavioural control perceptions can predict the behaviour. The TPB has been applied to predict a broad range of human behaviours, including physical activity, purchase alcohol consumption, transportation, smoking and food choice (Ajzen & Driver, 1992; Armitage & Conner, 2001; Blue, 1995; Cheng et al., 2005; De Cannière et al., 2009; Han & Kim, 2010; Hrubes, Ajzen, & Daigle, 2001; Lam & Hsu, 2006; Ong & Musa, 2011c; Quintal et al., 2010).In addition, Ajzen and Driver (1992) applied the TPB to predict leisure choice where college students answered a questionnaire that measured involvement, attitude, moods, subject norms, PBC and intention for five leisure activities (mountain climbing, spending time at the beach, boating, jogging or running, and biking). After one year, respondents reported how often they had accomplished these

behaviours during the preceding year. They found that attitude, subjective norms and PBC predicted leisure intentions whereas intention and PBC predicted leisure behaviour. They concluded that the TPB can advance our understanding of the factors which distinguish performance of leisure activities.

Lam and Hsu (2004) applied the TPB in a Chinese setting and investigated the relationship between components of this theory and past behaviour among potential travellers from Mainland China to Hong Kong. Results reported that the TPB model describes the intention to travel moderately well. Attitude, PBC, and past behaviour are found to be related to respondents' travel intention. Although some researchers (Lee & Gould, 2011; Melby, 1994; Ouellette & Wood, 1998) believed that past behaviour should be one of the components of the TPB model, other studies have demonstrated that when people intentionally form intentions, past behaviour probably is a contributing factor (Ajzen, 1991; Lam & Hsu, 2004; Lam & Hsu, 2006). They believed that past behaviour can be related to behavioural intention of the person behaving. Cheng, Lam and Hsu (2005) compared the sufficiency of both the TPB with the extended model of the TPB by adding past behaviour as a variable to examine different types of dissatisfaction responses. The findings revealed that the TPB extended model does not significantly improve the three types of dissatisfaction response intention.

Joynathsing and Ramkissoon (2010) used the TPB and pull and push theories to explore the behavioural intention of European tourists to select a specific destination for their holiday. Results showed that the push and pull motives of travellers affect their attitude toward behaviour. However, attitude and subjective norms were the determinants of behavioural intention, and perceived behavioural control did not significantly affect behavioural intention.

Ong and Musa (2011a) applied the TPB together with norm activation theory to investigate the relationship between components of the TPB and personal norm with responsible underwater behaviour among 413 scuba divers in five Malaysian islands. They found that three important components of attitude could explain responsible underwater behaviour well. These were knowledge about specific behaviour (cognitive), awareness of results (affective) and commitment to the behaviour (conative). Therefore, educational programmes on marine issues could increase divers' knowledge, awareness and personal commitment to enhance environmental responsibility. They also found that divers are more concerned about their safety than the protection of marine life.

Wang and Ritchie (2012) applied TPB to investigate its components' influence on crisis planning intentions. They understood that attitude, subjective norm and past crisis experience are factors that influence crisis planning behaviour but the path coefficient was not significant in the relationship between PBC and behavioural intention. However, other studies have found PBC to be a strong predictor of behaviour and intention (Ajzen & Driver, 1992; Armitage & Conner, 2001; Lam & Hsu, 2004; Lee & Gould, 2011).

2.4 Satisfaction

Cadotte, Woodruff and Jenkins (1987) defined satisfaction as an "impression after the evaluation of use of the product or service" (p. 305). All definitions of customer satisfaction explain satisfaction as a process (see Table 2.1). The majority of these definitions see satisfaction as the final step of a process (Millan & Esteban, 2004).

Table 2.1

Definition of Satisfaction

Reference	Definition
Oliver (1981, p. 27)	• Final psychological state resulting from the disconfirmed expectancy related to initial consumer expectations
Swan, Trawick and Carroll (1982, p. 17)	• Evaluative or cognitive opinion which analyses whether the product represents a satisfactory or poor result for its end users • Emotional response towards product
Churchill and Surprenant (1982, p. 491)	• The conceptual response by the consumer to the purchase and use of a product which comes from the comparison of the rewards and cost of purchase relative to expectations • Operatively, similar to an attitude because it can be measured as the total satisfaction from various attributes
Labarbera and Mazursky (1983, p. 394)	• Subsequent evaluation of purchase • Evaluation of surprise derived from the purchase of a product or service
Cadotte, Woodruff, and Jenkins (1987, p. 305)	• Impression after the evaluation of use of the product or service
Tse and Wilton (1988, p. 204)	• Consumer response to the evaluation of the perceived difference between expectations and final result after consumption
Westbrook and Oliver (1991, p. 84)	• Subsequent evaluative opinion of choice relative to specific purchase
Fornell (1992, p. 11)	• Overall evaluation after purchase
Oliver (1992, p. 242)	• The coupling of coexisting attributes to other sensations derived from consumption
Halstead, Hartman, and Schmidt (1994, p. 122)	• Emotional response associated with a specific transaction resulting from the comparison of the result of the product to some set standard prior to purchase
Oliver, (1996, p. 13)	• Judgement of sufficient level of satisfaction offered by a product or service during consumption

Adapted from (Millan & Esteban, 2004)

Faullant, Matzler and Mooradian (2011) believed that mountaineering is an activity which is intrinsically rewarding and potentially able to reward climbers with peak experience. Strong personal satisfaction may be achieved on the mountain, created by the "deep immersion in a task" (Faullant et al., 2011, p. 1,424). This is however likely to be experienced by skilled climbers, whose experience and skill are at even balance (Ewert, 1994). However, any climber may also experience intense satisfaction based on the final evaluation of their individual experiences.

Oliver (2010, p. 8) believed that "satisfaction is the consumer's fulfilment response". It is a judgment that a product or service feature, or the product or service itself, provides a pleasurable level of consumption-related fulfilment, including levels of under- or over-fulfilment. In the tourism and hospitality field, customer satisfaction plays an essential role in the survival and future of tourism services and products (Naidoo, Ramseook-Munhurrun, & Seegoolam, 2011). It influences the destination choice , consumption of goods and services, and revisit intention (Kozak & Rimmington, 2000; Yoon & Uysal, 2005).

Churchill and Surprenant (1982, p. 491) believed that product performance alone can provide satisfaction of the tourist. Based on this, Gronroos (1990) defined tourist satisfaction as the measurement of the actual performance outcome. International tourists from different countries have various levels of emphasis on several aspects of services like security and safety, health, hygiene, employee appearance and entertainment (Yu & Goulden, 2006). The differences in thinking and approach to the received service can create different levels of satisfaction among tourists. Therefore, understanding the level of tourist satisfaction and their product performance in the destination are essential for managers to develop products and services (Yu & Goulden, 2006).

Oliver (1997) elaborated on the measurement of customer satisfaction in the literature. The overall satisfaction measurement differs from the measurement of tourism attributes' satisfaction. Overall satisfaction reflects overall evaluation of a stay whereas attribute satisfaction measures several aspects of services and destination attributes (Faullant, Matzler, & Füller, 2008). Choi and Chu (2001) considered overall satisfaction as overall feeling of the customer towards a service in a post-service presentation. It can be measured with a single item, or several items which form a composite value of overall satisfaction.

Customer satisfaction has been widely investigated in tourism and hospitality fields because it is essential in the future of tourism services and products (Gursoy, Jurowski, & Uysal, 2002; Naidoo et al., 2011). As the level of tourist satisfaction can be affected by social group, weather, crowding or conflicts (Hinch & Higham, 2011), increasing tourism satisfaction is not very easy for managers (Lee, Graefe, & Burns, 2004).

Two previous studies on tourists' satisfaction have been conducted in the Malaysian state of Sabah where the current study was carried out (Musa, 2002; Musa et al., 2006). Musa (2002) recorded high satisfaction among scuba divers in Sipadan. However, some divers were concerned at the level of impact especially with regards to over-development of the island. Musa et al. (2006) also recorded high satisfaction among divers in Layang Layang. They proposed that the 'marine life' dimension is the most important factor in influencing scuba diving satisfaction on the island.

According to Akama and Kieti (2003), tourists, like other customers, get information via commercials, mass media, tourism advertisements, brochures or informal information through relatives and friends about a destination, before having initial expectations. Therefore, tourism expectations will eventually affect the level of tourist satisfaction. Additionally, tourist satisfaction can be assessed by the expectation disconfirmation theory

where their expectation is compared to the actual destination outcome (Bigne, Sanchez, & Sanchez, 2001; Chon, 1989; Francken & Raaij, 1981; Oliver, 1980; Valle et al., 2006).

2.5 The Expectation Disconfirmation Theory (EDT)

Oliver (1980) described EDT as the intention of customers to reuse a service or to repurchase a product which is determined by their satisfaction with previous use of that service or product. Oliver (1980) defined disconfirmation (D) as the difference between post-purchase performance (P) of a service or product and pre-purchase expectation (E) of customer (D = P – E) and believed that disconfirmation has a strong relationship with customer satisfaction. Consumers develop expectations about a product before they purchase it. Moreover, consumers usually compare the actual performance and their expectation of the product. Positive disconfirmation is present if the actual performance is better than expected. Thus, the consumer becomes highly satisfied and will probably purchase the product again. On the other hand, negative disconfirmation and dissatisfaction will occur if the actual performance is weaker than expected. The unsatisfied consumer will probably not purchase the product again (Yoon & Uysal, 2005).

Chi and Qu (2008) stated that EDT can be used for research on tourist behaviour. Satisfied tourists are more willing to recommend the destination to others or revisit the same place again. They are also more likely to share their experience with their relatives and friends.

Many studies have been conducted using EDT. For example, Liao et al. (2007) investigated customer satisfaction in the continued use of online service based on EDT and the TPB. The findings of this study showed that satisfaction, perceived usefulness and subjective norm influence behaviour intention of customers to continue using the e-service.

In addition, their study also highlighted that EDT had a better explanatory power than the other models in investigating the influence of satisfaction on customer behaviour. Hui, Wan and Ho (2007) investigated the overall satisfaction of different segmented groups of tourists (from Europe, Oceania, Asia and North America) on price, accommodation, food, attraction and culture. Based on EDT, the results showed that all tourists will recommend Singapore to others and they will revisit the country in future.

Valle et al. (2006) explored the relationship between satisfaction and destination loyalty intention with EDT using Structural Equation Modelling (SEM). The results showed that tourist satisfaction is an important factor in destination loyalty. Yoon and Uysal (2005) examined the influence of motivation and satisfaction on destination loyalty using SEM and concluded that tourism destination loyalty is related to satisfaction and motivation. Many studies have proven the direct effect of tourist satisfaction on loyalty intention. However, Chen and Gursoy (2001) highlighted that visitors may wish to experience a new attraction even if they are satisfied with the previous one. Baker and Crompton (2000) utilized EDT to investigate quality, satisfaction and behavioural intentions and suggested that evaluation efforts should include assessment of both performance quality and satisfaction. Liao et al. (2007) applied the TPB and EDT to examine customer satisfaction in the continued use of e-service. They believed that the EDT can be applied to indicate the effect of customer satisfaction on behaviour intention.

2.6 Loyalty Intention

Understanding and maintaining customers are important for businesses. Therefore business managers aim to achieve high customer satisfaction to increase loyalty for products. Backman and Crompton (1991) found that customer loyalty refers to the behaviour and

attitudes toward services and repetition of their usage. Hallowell (1996) explained the relationships between customer satisfaction, customer loyalty and profitability. The findings revealed that satisfaction is related to customer loyalty which in turn is related to profitability. Both academics and practitioners believed that consumer satisfaction and loyalty are inextricably linked (Oliver, 1999).

Faullant, Matzler, and Fuller (2008) investigated the impact of satisfaction and image on loyalty in Alpine ski resorts. The results showed that ski resorts with high satisfaction and image ratings have high loyalty intention. Yuksel, Yuksel, and Bilim (2010) investigated the influence of destination attachment on tourist satisfaction and loyalty. Results from SEM showed that the level and nature of destination attachment influence tourists' experience and future loyalty intention. Moreover, Halpenny (2006) supported that destination attachment has effect on customer satisfaction. In addition, Yuksel and Yuksel (2007) argued that in some leisure activities like shopping, the shopping satisfaction of the tourists has a direct effect on loyalty intention.

In tourism research, a similar approach was adopted and tourist loyalty intention is explained in terms of the intention to revisit the destination and willingness to recommend it to friends and relatives (Bigne et al., 2001; Cai & Bai, 2003; Chen & Gursoy, 2001; Niininen, Szivas, & Riley, 2004; Petrick, 2004). Some researchers believed that information about factors which can increase tourist loyalty is important for tourism marketers and managers because repeat visitation is less expensive than attracting new tourists (Valle et al., 2006). Therefore, this approach can help managers to find segments of destination that can attract repeat visitation. A structural model examined the effects of tourist motivation and satisfaction on destination loyalty (Yoon & Uysal, 2005). The findings indicated that push motivation and satisfaction influence tourism destination loyalty (Yen & Lu, 2008).

Valle et al. (2006) explored the relationship between travel satisfaction and destination loyalty intention. The results from SEM pointed out that tourism satisfaction is essential to determine destination loyalty. A greater level of satisfaction will increase the likelihood of repeat visits in the future and recommendation to others. According to Chen and Gursoy (2001) visitors may wish to experience a new attraction even if they were satisfied with the previous attraction. Thus, loyalty intention should be measured in terms of the willingness to recommend attractions. Kim (2008) confirmed the significant influence of satisfaction on destination loyalty. Lee et al. (2007) found a statistically significant effect of tour satisfaction on the recommendations of the tour to others. Howat, Crilley, and McGrath (2008) also reported that overall satisfaction significantly influences three attitudinal loyalty variables: revisit, recommend to others or visit same centre. Therefore, two indicators can be considered when measuring destination loyalty intention, namely intention to revisit and willingness to recommend.

2.7 Personality

There are numerous definitions of personality. Cattell (1950) believed that personality as "that which permits a prediction of what a person will do in a given situation" (p. 2). Allport (1961) defined personality as "the dynamic organization within the individual of those psychophysical systems that determine his characteristic behaviour and thought" (p. 28). Also Mischel and Soda (1998) highlighted "signature of personality" to distinguish individual features. In addition, John and Srivastava (2010) proposed that "personality represents those characteristics of the person that account for consistent patterns of feeling, thinking, and behaving" (p. 4).

Funder (2001) believed that "personality refers to individuals' characteristic patterns of thought, emotion, and behaviour, together with the psychological mechanisms - hidden or not - behind those patterns" (p. 2). Feist and Feist (2009) stated that personality refers to "a pattern of relatively permanent traits and unique characteristics that give both consistency and individuality to a person's behaviour" (p. 4).

McCrae and Terracciano (2005) investigated universal features of personality traits from the observer's perspective in 50 different cultures. They argued that "features of personality traits are common to all human groups" (p. 1). Feist (2010) believed that two key components can be derived from the above definition. First, personality can make us unique and distinguish us from others. Second, personality traits are relatively consistent. On the other hand, Carducci (2009) argued that consistency of behaviour does not mean an individual's personality never changes. The level of consistency in the behaviour depends on the extent to which situational factors as well as one's personality determine thoughts, feelings and behaviour.

There are various approaches in the measurement of personality. Among them are the Minnesota Multiphasic Inventory (Hathaway & McKinley, 1943), Cattell's Sixteen Personality Factor Questionnaire (Raymond Bernard Cattell, Eber, & Tatsuoka, 1988) and Eysenck's personality inventory (Eysenck, 1968). Some researchers measured specific personality characteristics such as optimism (Scheier & Carver, 1985), self-motivation (Dishman, Ickes, & Morgan, 1980) and locus of control (Rotter, 1966). McCrae and Costa (1997) proposed that the Five Factor Model (FFM) and their characteristics describe "a common human structure of personality" (p. 515). Most personality researchers agreed that FFM is the most comprehensive personality model (Barrick, Mount, & Gupta, 2003; Judge, Heller, & Mount, 2002; McCrae, 1989; McCrae & Costa Jr, 1987, 2008; McCrae & John,

1992; Ong & Musa, 2011a). McCrae and Costa (1987) validated FFM of personality across instruments and observers.

Earlier, Costa and McCrae (1980) identified three broad dimensions of personality which are Neuroticism (N), Extraversion (E) and Openness to Experience (O). A few years later, they found that those three dimensions was not a complete model to measure personality. They added two more dimensions which are Conscientiousness (C) and Agreeableness (A), and published the new version as the NEO-PI (McCrae, 1989, p. 238). The NEO-PI describes personality with five dimensions (Digman, 1990; McCrae & Costa Jr, 1985; McCrae & John, 1992). These dimensions are neuroticism, extraversion, agreeableness, conscientiousness and openness to experience.

Each dimension of NEO-PI describes a collection of personality characteristics. Neuroticism is characterised by a lack of emotional stability. Highly neurotic people are normally sad, nervous, distrustful, insecure, worried and have difficulty in managing stress. Extraversion represents sociability, talkativeness, cheerfulness, fun-loving, optimistic and affectionate. Highly extravert people search for new excitement and opportunity. Openness to experience represents the original, creative, daring and independent. They tend to explore new ideas and devise novel opinions. Agreeableness is represented by good-nature, sympathetic, courteous, cooperative, friendly, trusting and forgiving. Highly agreeable people are sympathetic to others, fundamentally altruistic and eager to help and be helped in return. Conscientiousness represents the dutiful, disciplined, careful, reliable, organized, hardworking, deliberate and reliable. People with high conscientious trait tendency tend to actively plan and carry out tasks (Costa & McCrae, 1992).

Loehlin, Mccrae, Costa and John (1998) investigated components of the Big Five personality factors in common heritability. They found that all five broad factors of

personality “are substantially heritable and largely unaffected by shared environmental influences” (p. 449).

Vollrath, Knoch and Cassano (1999) investigated the relationship between personality (with FFM), risky health behaviour and perceptions of susceptibility to health risk. The findings showed that agreeableness and conscientiousness have negative direct influences on perceptions of susceptibility but neuroticism has a positive one.

McElroy, Hendrickson, Townsend and DeMarie (2007) tested the influence of personality and cognitive style on dispositional factors in the Internet usage. Their findings highlighted the use of personality as an antecedent variable. Moreover, Hirsh and Dolderman (2007) believed that personality traits of agreeableness are able to predict both consumerism and environmentalism. While consumerism was negatively associated with agreeableness, environmentalism was positively associated with agreeableness and openness to experience. Hirsh (2010) investigated the relationship between environmental concerns and personality traits. The derived results from SEM indicated that high levels of agreeableness and openness to experience are related to great environmental concern. An unexpected result was the influence of the neuroticism factor, where individuals who are more neurotic have a high level of environment concern.

Musa, Seng,Thirumoorthi and Abessi (2011), on the other hand, found that divers with high neuroticism display higher irresponsibility underwater. Swami, Chamorro-Premuzic, Snelgar and Furnham (2011) suggested that conscientiousness directly predicts waste management behavior, and Markowitz, Goldberg, Ashton and Lee (2012) observed a full mediation of attitude in the relationship between openness to experience and pro-environment behavior.

Many researchers believed that climbers have different personality traits compared with low risk sport participants (Breivik, 1996; Castanier, Scanff, & Woodman, 2010; C. Cronin, 1991; Freixanet, 1991; Jack & Ronan, 1998; Thomson & Carlson, 2014; Tok, 2011). However among climbers themselves, the personality cannot be tightly defined (Monasterio et al., (2014). Castanier, et al. (2010) found that the combination of low conscientiousness with high extraversion and/or high neuroticism constitute greater risk-takers. Freixanet (1991) discovered that extraversion and neuroticism have positive and negative correlations respectively with high-risk mountaineering. Tok (2011) believed that risky sport participants have high level of extraversion and openness to experience and low level of conscientiousness and neuroticism.

Monasterio et al. (2014) believed that climbers are not only influenced by inherent personality traits but also searching about range of experiences related to mountaineering. A few studies investigated other personality variable on climbers like conscientiousness, extraversion and neuroticism (Castanier et al., 2010; Freixanet, 1991). Freixanet (1991) examied personality characteristics of climbers who engaged in high physical risk sports. They found that extraversion was positively correlated to high risk mountaineering, whereas neuroticism was negatively correlated to them. In addition, they indicated that there was no difference in personality characteristics between mountain climbers and alpine climbers (with several experience at altitudes greater than 8,000m). They believed that mountain and alpine climbers generally have similar personality profile traits such as emotional stability, extraversion, seeking thrill, conformity to scocial norms and experience by socialized means.

Swami, Chamorro-Premuzic, Snelgar and Furnham (2011) suggested that conscientiousness positively and directly predicts waste management behaviour. Individuals with high conscientiousness may be more organised, self-disciplined and show morally

appropriate behaviour. They may be motivated to reuse, recycle and reduce their waste and thus increase waste management behaviour. Markowitz, Goldberg, Ashton and Lee (2012) explored the relationship between pro-environment action and broad personality traits. They showed that individuals' environmental attitudes and connection to nature fully mediate the relationship between openness to experience and pro-environment behaviour. In this study the five dimensions of personality are expected to influence climbers' responsible behaviour.

2.8 Spirituality

Fisher (2011) defined spirit as an "essential nature of human being, their strength of purpose, perception, mental powers, frame of mind" (p. 18). Some people believe that there are differences between spirituality and religiosity. Both Abraham Maslow, the father of humanistic psychology, and John Dewey, the creator of the philosophical school of Pragmatism, believed that spirituality is part of a person's being, and different from religiosity (Fahlberg & Fahlberg, 1991). Fisher (2011) argued that "spirituality helps individuals to live at peace with themselves, to love God and their neighbour, and to live in harmony with the environment" (p. 20). Vaughan (1991) defined spirituality as "a subjective experience of the sacred" (p. 105). Some authors (Gomez & Fisher, 2003; Meezenbroek et al., 2012) recognized spirituality in terms of universal human experience and defined it as connectedness or relatedness.

Studies have investigated the relationship between spiritual well-being and various issues such as ethical orientations in decision making (Fernando & Chowdhury, 2010), its important relationship with God (Fisher, 2010), the search for true self (Ambrož & Ovsenik, 2011), the meaning and purpose of life (Finkelstein et al., 2007) and as a predictor of mental

health (Arnette et al., 2007). Research has been conducted on populations such as pilgrims (Huntsinger & Fernández-Giménez, 2000) and university students (Fisher, 2002).

Spirituality may be confused with another aspect which is frequently sought after by experienced adventurous climbers on mountains. This is called ‘flow experience’ (Csikszentmihalyi, 1992) or ‘peak experience’ (Maslow & Pi, 1964). Flow is 'the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it at great cost, for the sheer sake of doing it' (Csikszentmihalyi, 1992, p. 4). The concept of flow experience was adapted from Maslow’s peak experience which signifies ‘felt as a self-validating, self-justifying moment which carries its own intrinsic value with it’ (Maslow & Pi, 1964, p. 68). Both flow experience and peak experience are the states of mind which could be achieved in performing certain task such as rock climbing (Pomfret, 2006), sky diving (Lipscombe, 1999) and pilgrimaging at religious sites (Cohen, 2006). However, spirituality is a more stable state of mind, achieved through perceptions and feedback from people and environment.

Relationships between religion and spirituality with several factors of physical health such as heart disease, hypertension, cholesterol, cancer, mortality and health behaviour have been identified (Hill & Pargament, 2003; Koenig, Larson, & Larson, 2001).

A number of studies have reported the relationships between spirituality and physical health (Chida, Steptoe, & Powell, 2009; Hill & Pargament, 2003; Seeman, Dubin, & Seeman, 2003). Chida et al. (2009) in their meta-analysis results indicated that religiosity/spirituality is related to reduced mortality in healthy population studies. Religion and spirituality are also distinctive dimensions that add unique explanatory power to the prediction of physical and mental health (Hill & Pargament, 2003, p. 72). Seeman et al. (2003, p. 62) even suggested

that aspects of religiosity/spirituality may indeed be linked to important physiological regulatory processes.

Even though Moberg (2002) recognized the complexity in measuring spirituality, there exist measurements introduced by several researchers. Among them are the Prague Spirituality Questionnaire (2005), the Spiritual Well-being Scale (1983), the Self-Transcendence Scale (1991), the Spirituality Subscale of the Mental, Physical and Spiritual Well-being Scale (1995), the Spiritual Well-Being Scale of the Functional Assessment of Chronic Illness Therapy (1999), the Transformative Experience Questionnaire (2002), the Spirituality well-being model (1998) and the Spiritual Health And Life Orientation Measure (SHALOM) (2010).

In 1975, the National Interfaith Coalition on Aging (NICA) proposed a holistic definition of spiritual well-being as "the affirmation of life in a relationship with oneself (personal), others (communal), nature (environment), and God (or transcendental other)"(National Interfaith Coalition on Aging, 1975). Based on NICA's definition Fisher (1998) and Gomez and Fisher (2003) developed the Spirituality Well-Being Questionnaire (SWBQ; $\alpha = 0.92$) and based on this questionnaire, Fisher (2010) developed SHALOM.

The acronym of SHALOM is made up of two components – Spiritual Health measure (SHM) and Life-Orientation Measure (LOM). SHALOM was based on the 4 domain (4D) model of spiritual health/well-being SH/WB (Fisher, 2011). Fisher (2010, 2011) believed that SHALOM represents the quality of relationship between every person with themselves, other people, the environment and God. In the current study, SHALOM is employed to examine climbers' spirituality level at Mount Kinabalu in four domains of spiritual well-being:

i) Personal domain reflects self-awareness as a driving force of the human spirit to search for identity and self-worth;

ii) Communal domain represents depth and quality of inter-personal relationship which includes love, forgiveness, trust, hope and faith in humanity;

iii) Environmental domain shows connection with the environment or unity with the environment; and

iv) Transcendental domain reflects relationship of self with someone or something beyond the human level (i.e., cosmic force, ultimate concern, transcendent reality or God).

Mountaineering literature often highlights spiritual values in mountain environment, and climbers often reports spiritual and transcendental experiences in the mountains (Arave & Boren, 2012; Bernbaum & Gunnarson, 1990; Bron, 2001; Sharpley & Jepson, 2011). Mountains have been identified as sites which have significant attachment to specific religious and respected as destinations for spiritual pilgrims and the homes of Gods (Bernbaum, 2006). Among these are Mount Kailash in Tibet (the sacred centre of the world for Bön, Buddhism, Hinduism, and Jainism), Olympus in Greece, Fuji in Japan, Zion and Sinai in the Middle East, Everest in Nepal, Emei Shan in southwest China (one of the four sacred Buddhist mountains), San Francisco Mountain in Arizona (sacred to most Indian tribes of the American Southwest), Uluru in central Australia, and Mount Kinabalu in Borneo. Climbers could be closer to God through the natural environment and mountains are places of spiritual renewal. These serve as powerful symbols of presence of the God on earth (Cronon, 1996) and it could be a motivation to climb in different cultures (Maher & Potter, 2001).

2.9 Development of Research Model

Based on the review of literature, previous studies support the relationship between personality, spirituality, satisfaction, attitude towards behaviour, norms and PBC (independent variables) and responsible mountaineering behaviour and loyalty intention (dependent variables). Therefore, a model for this research is proposed (Figure 2.2).

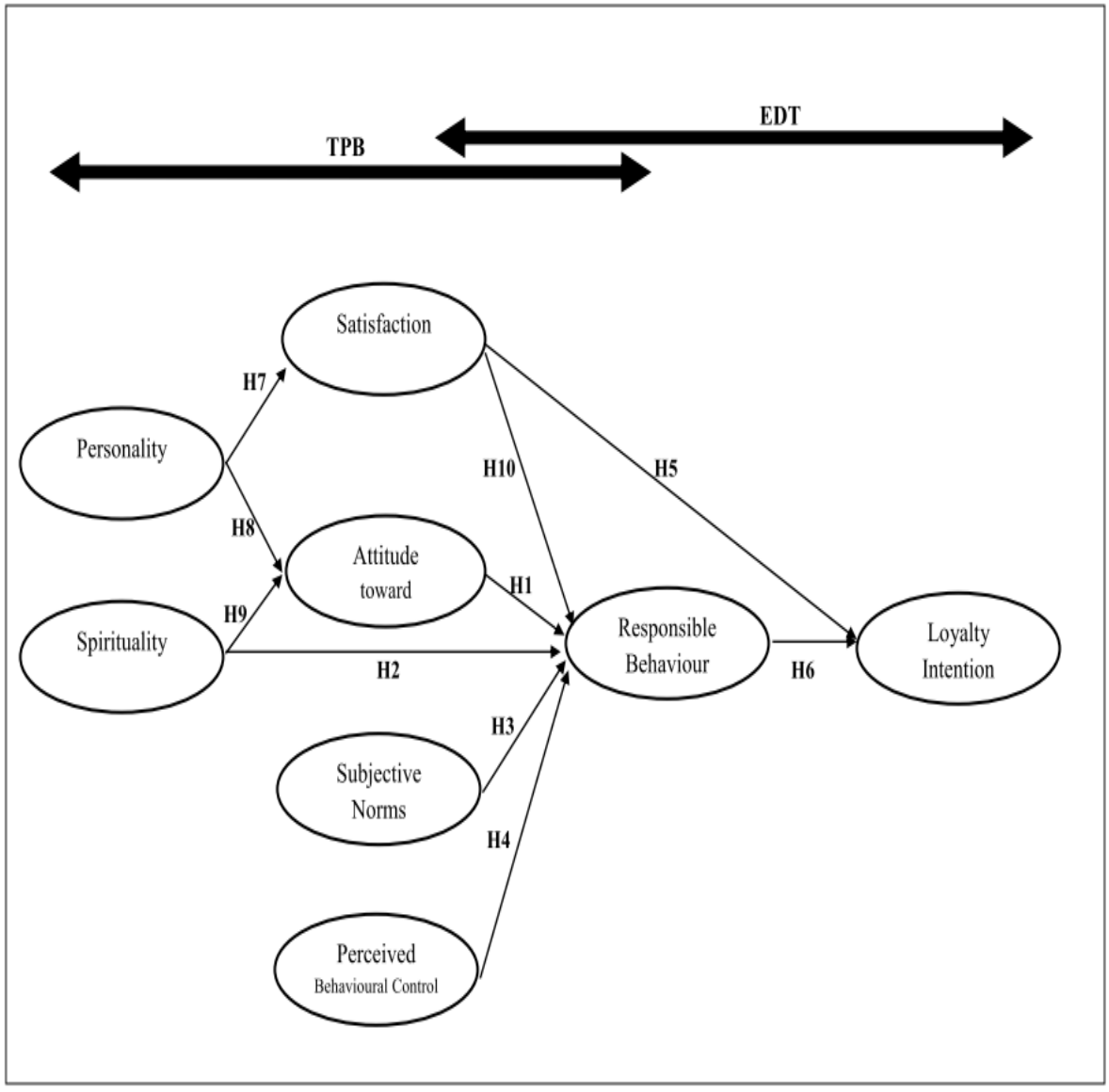


Figure 2.2. Framework of current study

The relationship between attitude and behaviour has been investigated in numerous behavioural models which revealed how attitude can influence behaviour. The relationship between environmental attitude and environmental responsible behaviour has been discovered in previous research (Backlund & Williams, 2003; Schultz & Zelezny, 1998; Tarrant & Cordell, 1997). Therefore, the relationship between attitude towards behaviour and responsible mountaineering behaviour is examined in the current study. It is hypothesized that:

H1: Attitude towards behaviour has a significant influence on responsible mountaineering behaviour.

Although there is limited research that examined the relationship between spirituality and responsible mountaineering behaviour, studies discovered that spirituality influences behaviours such as coping behaviour (Arnette et al., 2007; Zwingmann et al., 2011), control behaviour (Mansager & Eckstein, 2002), positive behaviour (Gomez & Fisher, 2003) and health behaviour (Gomez & Fisher, 2005). Thus, a direct relationship between spirituality and responsible mountaineering behaviour is proposed in this framework.

H2: Spirituality has a significant influence on responsible mountaineering behaviour.

With respect to the TPB, there is a strong relationship between behaviour intention and the actual performance of the behaviour (Lam & Hsu, 2006; Liao et al., 2007; Wang & Ritchie, 2012). Many researchers directly measure the influence of attitude, subjective norms and PBC on the behaviour itself (Ong & Musa, 2011a; Oreg & Katz-Gerro, 2006; Valle et al., 2006). Therefore, it is hypothesized that attitude, norms and PBC are related to responsible mountaineering behaviour as follows:

H3: Norms have a significant influence on responsible mountaineering behaviour.

H4: PBC has a significant influence on responsible mountaineering behaviour.

Based on EDT (Oliver, 1980), numerous studies have found that satisfaction directly influence loyalty intention (Baker & Crompton, 2000; Hui et al., 2007; Liao et al., 2007; Valle et al., 2006; Yoon & Uysal, 2005; Yuksel et al., 2010). Therefore, the current study is examining the relationship between satisfaction and loyalty intention among Kinabalu climbers with the hypothesis:

H5: Satisfaction has a significant influence on loyalty intention.

Previous studies have demonstrated a strong relationship between behaviour and loyalty (Baker & Crompton, 2000; Han, Kim, et al., 2011). With respect to this, the current study aimed to investigate the relationship between responsible mountaineering behaviour and loyalty intention with the following hypothesis:

H6: Responsible mountaineering behaviour has a significant influence on loyalty intention.

Personality influences many different aspects of satisfaction such as customer satisfaction (Siddiqui, 2012), career satisfaction, life satisfaction (Lounsbury, Park, Sundstrom, Williamson, & Pemberton, 2004) and job satisfaction (Judge et al., 2002). There has not been any research carried out to investigate the relationship between personality and satisfaction in mountaineering. Therefore, the current study hypothesised the following:

H7: Personality has a significant influence on satisfaction.

Many studies have found a significant relationship between personality and general environmental attitude (Hirsh, 2010; Hirsh & Dolderman, 2007; Markowitz et al., 2012; Mayer & Frantz, 2004; Swami et al., 2011). It has been suggested that personality characteristics can predict more special value orientation and attitude (McCrae & Costa Jr, 2008; Roccas, Sagiv, Schwartz, & Knafo, 2002). For example, Ong and Musa (2012) have proven a positive relationship between personality and scuba divers' environmental attitudes. Therefore, it can be hypothesised that there is relationship between personality and attitude towards behaviour as follows:

H8: Personality has a significant influence on attitude towards behaviour.

No research has been conducted on the relationship between spirituality and attitude among mountaineers. However, evidence showed that spirituality influences positive attitude (Gomez & Fisher, 2003; Schultz, Simpson, & Elfessi, 2010). Therefore, it is hypothesized that spirituality has a relationship with climbers' attitude. In this framework, attitude towards behaviour is a mediating variable between spirituality and responsible mountaineering behaviour. Therefore, the following hypothesis is formulated:

H9: The influence of spirituality on responsible mountaineering behaviour is mediated by attitude towards behaviour.

In the current study responsible mountaineering behaviour is a mediating variable between satisfaction and loyalty intention. Therefore, the following hypothesis is formulated:

H10: The influence of satisfaction on loyalty intention is mediated by responsible mountaineering behaviour.

2.10 Summary

This chapter reviews literature of responsible mountaineering behaviour based on the TPB and EDT. A conceptual framework is proposed to explain the relationships between constructs based on the two theories and the related literature review. The components of the TPB (attitude, subjective norm and PBC) are explained and adjusted within the framework to investigate their influence on responsible mountaineering behaviour. The constructs of satisfaction, personality and spirituality are added and discussed to better understand the role of these factors in influencing responsible mountaineering behaviour and loyalty intention.

Although much research has examined environment responsible behaviour in different areas, there has been limited research available from the perspective of responsible mountaineering behaviour. The next chapter explains the methods used in this study to collect the data, in effort to confirm the relationship of the constructs within the research framework, which eventually lead to the proposal of the mountaineering responsible behaviour model.

CHAPTER 3: METHODS

3.1 Introduction

The main purpose of this chapter is to explain the research design and methods used to achieve the research objectives. This chapter discusses the development of the questionnaire, its validity and reliability tests, sampling method, and data collection process.

3.2 Research Design

Reynolds (1971) believed that there are two common strategies in research, namely research-to-theory and theory-to-research. The research-to-theory strategy derives "the laws of nature from a careful examination of all the available data" (p. 140). In this strategy, new theories are developed. In this process, researchers choose a phenomenon and list its characteristics, evaluate the characteristics in different situations, analyse the data, find systematic patterns from the data and finally form significant patterns as theoretical statements (Lynham, 2002).

The theory-to-research strategy is used to test hypotheses in studies (Reynolds, 1971). This strategy derives hypotheses from theory and then investigates them by collecting data. In this method, researchers develop a theoretical model, propose hypotheses, design a research to test hypotheses, and compare results with existing theory (Lynham, 2002). This theory-to-research strategy is suitable for studies in behavioural and human sciences. One strategy is not superior over the other (Lynham, 2002; Reynolds, 1971). The value of these strategies depends on the theories that would be created (Lynham, 2002).

Downey and Ireland (1979) believed that methodologies are tools of question or enquiry in research. Kumar (2010) highlighted two essential approaches to enquiry: structured approach and unstructured approach. The structured approach to enquiry is

categorised as quantitative research and unstructured approach classified as qualitative research (Kumar, 2010).

Quantitative research analyses data statistically when using predominantly quantitative variables. This method predicts conclusions and discovers cause and effect relationships between constructs. Qualitative research inductively explores the phenomenon of the research which is commonly carried out by in-depth interview, focus group discussion and content analysis of secondary data. The purpose of this research is to describe an event, problem, phenomenon or situation (Firestone, 1987; Kumar, 2010). The purpose of study determinates which methodology, qualitative or quantitative, to be applied in the study (Kumar, 2010). Blundell and Costa Dias (2000) examined evaluation methods for non-experimental data and believed that appropriate method to measure non-experimental data related to three factors: "the type of information available to the researcher, the underlying model and the parameter of interest" (p. 437).

Baumgartner, Strong and Hensley (2002) highlighted five types of non-experimental research, namely descriptive research, relationship research, correlation research, causal comparative research and survey research (Cook, Shadish, & Wong, 2006). In descriptive research, a phenomenon is described without making conclusions about the relationship between variables. Relationship research is reported as positive and negative correlations. Correlation research assess the nature and degree of relationship between two occurring variable. Comparative research compares two or more group on a variable but do not create cause and effect relationship. Survey research is a popular method of collecting data and very common in non-experimental research (Gordon & Porter, 2009).

The current research objectives are to identify factors which influence responsible mountaineering behaviour at Mount Kinabalu and investigate relationships among factors. It

uses structural equation modelling (SEM) as a technique to analyse the data, to describe phenomena and examine relationship between variables. Thus, the researcher applied a quantitative approach to measure the relationship between variables which is approved by the Sports Centre Ethics Committee of the University of Malaya.

3.2.1 Survey research

A survey is a quantitative research method which consists of collecting data from a population, describing data, explaining and analysing the information to answer research questions. In this type of research, data may examine relationships between variables (Swartz, Money, Remenyi, & Williams, 1998), apply interviews or questionnaires to describe characteristics, behaviour or attitudes of a population (Trochim, 2006).

The current research utilises a theory-to-research strategy with quantitative research as a structured approach using survey.

3.2.2 Instrumentation

The research framework in the current study has three types of variables: independent, dependent and mediating variables. The independent variables are personality, spirituality, subjective norm and PBC because these variables are not influenced by other variables. The dependent variables are responsible behaviour and loyalty intention because these variables are influenced by other variables. The mediating variables are satisfaction and attitude toward behaviour as they transfer the effect of independent variables to dependent variables. Responsible behaviour has two roles in this framework. First, it can play a mediating role, where it transfers the effect of variables to loyalty intention. Second, it is a dependent

variable, which is affected by other variables (e.g. spirituality, attitude towards behaviour, norms, PBC and satisfaction).

3.3 Questionnaire Validation Procedure

The analytical steps and methods of questionnaire validation process consists of instrument development, data collection, exploratory study, confirmatory study and SEM (Koufteros, 1999; Lu, Lai, & Cheng, 2007) as shown in Table 3.1.

Table 3.1

Analytical Steps in the Current Study

Step 1: Instrument Development • Literature review • Theoretical basis • Definitions • Content validity through panel of experts • Face validity through pretesting • Pilot study
Step 2: Exploratory Study • Corrected item-total correlation • Factor analysis • Reliability through Cronbach's alpha • Revision
Step 3: Exploratory Factor Analysis
Step 4: Confirmatory Study • Unidimensionality assessment • Construct reliability • Convergent validity • Discriminant validity
Step 5: Structural Equation Model (SEM)

Adapted from (Koufteros, 1999; Lu et al., 2007)

3.4 Step 1: Instrument Development

It is important to develop valid and reliable questionnaires as they reduce measurement error. Groves (1987) defined measurement error as the "discrepancy between respondents' attributes and their survey responses" (p. 162). Instrument development involves several stages (Koufteros, 1999; Lu et al., 2007). The first stage is literature review that includes examining the purpose, objectives, research questions, and hypothesis of this research. The second stage is the theoretical basis, where content is transmitted from literature or framework to statements or questions to create a link between content and research questions and identify the independent, dependent and mediator variables. Defining and operationalizing each concept in the framework is essential at third stage, where measures are written for each concept that is how to measure what has been conceptualized. The fourth stage is to establish content validity through a panel of experts. The next stage is to measure face validity before conducting the pilot study. The process of developing the questionnaire is explained below.

3.5 Questionnaire

The questionnaire comprises six sections. Section one has several demographic questions, including gender, nationality, marital status, age, education level, experience in mountain climbing or other outdoor activities and physical activity level of respondents. Section two consists of 23 items concerning responsible mountaineering behaviour in terms of safety and health. Section three contains 34 items about attitude (knowledge, awareness and commitment towards mountain climbing) and the influence of others on behaviour while climbing Mount Kinabalu (subjective norm and perceived behavioural control). Section four comprises 9 items that measure satisfaction and loyalty intention in Mount Kinabalu. Section

five is composed of 25 items that measure five types of personality characteristics (Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience) and the last section measures spirituality with 20 items.

3.5.1 Responsible Mountaineering Behaviour

High altitude destinations are located at 2,500 metres and above (Pollard & Murdoch, 1997). At this altitude, responsible mountaineering behaviour is important to maintain climbers' safety and health, as the activity becomes more dangerous and risky. A total of 23 items were used to measure responsible mountaineering behaviour. The items were developed from literature on mountaineering rules (Curry, Joseph, & Slee, 2001; Liu, 2006; Pomfret, 2006; Windsor et al., 2009), safety and security information from Kinabalu National Park (2012) and expert opinions. The question was phrased as: Did you do the following when climbing Mount Kinabalu? Choices included 'Follow the mountain guide' and 'Drink enough water during the climb' (Table 3.2). Responses are rated on a 5-point Likert scale ranging from 1 being "never" to 5 being "always".

Table 3.2

Responsible Mountaineering Behaviour

Code	Item
	Did you do the following when climbing Mount Kinabalu?
RB1	Aware of my exact position on the mountain trail
RB2	Not in a hurry
RB3	Rest whenever necessary
RB4	Follow the mountain guide
RB5	Help other climbers in difficulty
RB6	Walk away from my group
RB7	Use the rope when needed
RB8	Keep myself clean/hygienic in the mountain
RB9	Drink enough water during the climb
RB10	Consume high energy food during the climb
RB11	Inform my mountain guide if I have any health problems
RB12	Carry a first aid kit
RB13	Have enough warm clothing
RB14	Wear comfortable climbing shoes/boots
RB15	Carry a torch light
RB16	Carry a rain coat/waterproof jacket
RB17	Carry a whistle
RB18	Challenge myself physically
RB19	Wear adequate warm clothing to avoid hypothermia
RB20	Use sun block
RB21	Carry a compass
RB22	Use sunglasses
RB23	Use a hat

3.5.2 Theory of Planned Behaviour

Ajzen (1991) believed that the Theory of Planned Behaviour (TPB) can be utilized in leisure activities such as skiing, swimming, horse-back riding, or mountain climbing. Researchers have applied the TPB in various aspects of tourism (Ajzen & Driver, 1992; Lam & Hsu, 2004; Lam & Hsu, 2006; Nunkoo & Ramkissoon, 2010; Quintal et al., 2010). This theory comprises three components that drive behaviour: Attitude toward behaviour, Subjective

norm, and PBC. These three factors usually predict behavioural intentions with a high degree of accuracy (Ajzen, 1991).

3.5.3 Attitude towards Behaviour

An attitude is a favourable or unfavourable preparation to do a specific behaviour toward an object (Lam & Hsu, 2006). In the tourism context, if people have a positive attitude towards tourism, they will protect the industry (Nunkoo & Ramkissoon, 2010). Zanna and Rempel (1988) revealed that attitudes relate to the feeling, belief and past behaviour toward an object. People who have positive attitude towards an object will have favourable beliefs, feeling and behaviours towards it. On the other hand, people who have negative attitude towards an object will have unfavourable beliefs, feeling and behaviours towards it (Ong & Musa, 2011a).

McGuire (1992) highlighted three components of the attitude model which are cognitive, affective and conative. The cognitive component includes knowledge, personal thoughts and ideas of an attitude. The affective component contains feelings and beliefs about certain issues. The conative component consists of behaviour of individual toward an object (Han, Kim, et al., 2011; Maloney et al., 1975).

In the current study, attitude towards behaviour was proposed based on the cognitive, affective and conative components (Best, 2010; Braun, 2012; Eagly & Chaiken, 2007; Han, Kim, et al., 2011; Hines et al., 1987; Maloney & Ward, 1973; Maloney et al., 1975). The cognitive component contains questions related to knowledge about mountain climbing. The affective component consists of questions on awareness of result of the responsible mountaineering behaviour. The conative component includes questions on commitment during mountain climbing. Thus, attitude comprises of three main dimensions: (1) knowledge

measured with seven items, (2) awareness measured with eight items, and (3) commitment measured with six items. A total of 21 items were self-developed from the literature (Han, Kim, et al., 2011; Maloney et al., 1975), and practices in mountaineering by expert opinions. The questions and responses for attitude towards behaviour are presented in Tables 3.3, 3.4 and 3.5. Responses were rated on a 5-point Likert scale ranging from 1 being "not at all" to 5 being "to a great extent".

Table 3.3

Knowledge of Specific Issue (Cognitive) Measurement

Code	Item
	To what extent do you believe that you have knowledge about the following with regard to Mount Kinabalu?
ATT.K1	Mountain climbing safety practices
ATT.K2	Pre-climb instructions
ATT.K3	Pre-climb requirements
ATT.K4	Mental preparation before climbing
ATT.K5	Weather conditions before climbing
ATT.K6	Skills required for climbing
ATT.K7	High risk places on the mountain

Table 3.4

Awareness of Behaviour Consequence (Affective) Measurement

Code	Item
	To what extent are you aware of the following while climbing Mount Kinabalu?
ATT.A1	Hypothermia can be avoided by wearing warm clothing
ATT.A2	Mountain guides are the best people to lead you to the peak
ATT.A3	The danger of climbing alone
ATT.A4	The need to be careful, calm and steady when climbing
ATT.A5	The weather may change drastically in the mountain
ATT.A6	The rock face can be very slippery when it rains
ATT.A7	The wind chill factors will drop the temperature to a much lower level
ATT.A8	In thick cloud the visibility could be close to zero

Table 3.5

Commitment (Conative) Measurement

Code	Item
	To what extent do you do the following?
ATT.C1	I think about mountain climbing a lot
ATT.C2	I often talk and share mountain climbing experiences with my friends
ATT.C3	I often talk and share mountain climbing experiences with my family members
ATT.C4	I like to be an active member of a mountaineering club
ATT.C5	I like to give donations to mountaineering organizations to support their activities
ATT.C6	I buy a lot of books/magazines about mountain climbing

3.5.4 Norms

In the tourism context, subjective norms relate to how willing individuals are to support tourism development if their partners, friends or family members encourage the behaviour (Nunkoo & Ramkissoon, 2010). There are various questionnaires to measure subjective norms. Ong and Musa (2011a) as well as Valle et al. (2005) used a subjective norm questionnaire with three questions which was developed by Fishbein and Ajzen (1975). Ajzen and Driver (1992) developed a subjective norm questionnaire which have been used by many researchers (Han & Kim, 2010; Han & Ryu, 2012; Lam & Hsu, 2004; Lam & Hsu, 2006). The subjective norm questionnaire developed by Taylor and Todd (1995) has also been used in previous research (Liao et al., 2007).

In addition, influences of media on human behaviour are gaining importance and cannot be ignored (Kaplan & Haenlein, 2010; Zhang et al., 2010). Social media such as Facebook, Twitter, YouTube, blogs as well as websites and magazines play an important role in providing travel information for tourists (Xiang & Gretzel, 2010) and affect behaviour (Fischer & Reuber, 2011).

Therefore, in this part, two norms were investigated: subjective norm and media norm. Four items were related to individuals (e.g. climbing partners or group members, other climbers, family members and mountain guides) and another four items were on media (e.g. social media, mountain climbing websites, mountain climbing magazines and destination specific websites). The questions for norms are presented in Table 3.6. Responses are rated on a 5-point Likert scale ranging from 1 being "not at all" to 5 being "to a great extent".

Table 3.6

Norms Measurement

Code	Item
	To what extent do the following people and media influence your behaviour when climbing?
SN1	Climbing partners/ group members
SN2	Other climbers
SN3	Family members
SN4	Mountain guides
SN5	Information from social media (e.g. Facebook, Twitter, YouTube, Blog, etc.)
SN6	Information from mountain climbing websites (e.g. www.mountaintrip.com, www.summitclimb.com, etc.)
SN7	Information from mountain climbing magazines (e.g. Climbing, Alpinist, Climb, etc.)
SN8	Information from destination specific websites (e.g. www.sabahtourism.com, www.mountkinabalu.my, etc.)

3.5.5 Perceived Behaviour Control

PBC plays an important role in the TPB. It refers to the difficulty in performing responsible behaviour with regard to safety and health during mountaineering. Researchers (Ajzen & Driver, 1992; Ong & Musa, 2011a; Oreg & Katz-Gerro, 2006; Valle et al., 2005) have adapted the questionnaire developed by Ajzen (1985). Oreg and Katz-Gerro (2006) and Ong and Musa (2011a) measured PBC with two items. Han and Ryu (2012) and Lam and Hsu

(2006) used four items to measure PBC which was developed by Perugini and Bagozzi (2001).

In the current study, PBC was measured by five items which were adapted from literature (Ong & Musa, 2011a; Oreg & Katz-Gerro, 2006) and self-developed from expert opinions. The items representing PBC are presented in Table 3.7. Responses are rated on a 5-point Likert scale ranging from 1 being "strongly disagree" to 5 being "strongly agree".

Table 3.7

*Perceived Behaviour Control Measure*ment

Code	Item
PBC1	It is just too difficult for someone like me to do much about my own safety/health during the climb
PBC2	There is no point in doing what I can for safety/health during the climb, unless others do the same
PBC3	I am very able to look after myself and my health on the mountain
PBC4	My group members are committed to looking after each other on the mountain
PBC5	I trust that my mountain guide will look after my safety on the mountain

3.5.6 Satisfaction

Satisfaction is important in planning marketable tourism products and services. It is also important for successful destination marketing in terms of choice, consumption of products and services and return to destination (Yoon & Uysal, 2005). Various scales have been created to investigate satisfaction in different aspects of human life such as life satisfaction, customer satisfaction, sport satisfaction, job satisfaction and tourist satisfaction. Oliver (1997) developed a satisfaction scale with 10 questions which has been used by various researchers (Bigné & Andreu, 2004; Bigné, Andreu, & Gnoth, 2005; del Bosque & Martín, 2008; Van Dolen, De Ruyter, & Lemmink, 2004; Zins, 2002). Another questionnaire is the

Basic Needs Satisfaction in Sport (BNSS) which was developed by Lonsdale et al. (2009) and Ng et al. (2011) with 20 questions. Diener, et al. (1985) developed the Satisfaction with Life Scale (SWLS) with five questions which have been used in previous research (Arrindell, Heesink, & Feij, 1999; Pavot & Diener, 1993). A questionnaire to measure actual satisfaction with travel experiences was developed by Yoon and Uysal (2005) with four questions and considered to be very general (Lee et al., 2007).

In the current study satisfaction was measured using an adapted version of Oliver's (1997) universal scale that measures overall satisfaction (Table 3.8). Responses are rated on a 5-point Likert scale ranging from 1 being "strongly disagree" to 5 being "strongly agree".

Table 3.8

Satisfaction Scale

Code	Item
SAT1	This climbing trip is exactly what I need
SAT2	I am satisfied with my decision to climb Mount Kinabalu
SAT3	I truly enjoyed this vacation in Mount Kinabalu
SAT4	I am not happy with my decision to climb Mount Kinabalu
SAT5	I am sure it is right to spend my holiday climbing Mount Kinabalu

3.5.7 Loyalty Intention

Loyalty intention is often studied in consumer research but seldom studied in tourism research (Yen and Lu, (2008). Yoon and Uysal (2005) highlighted the importance of tourism destination loyalty as tourists may revisit a destination or recommend it to others. Therefore, "revisiting intention" and "willingness to recommend" are important indicators in measuring destination loyalty intention (Valle et al., 2006).

Previous studies have used different questions to measure loyalty intention (Cronin, Brady, & Hult, 2000; Homburg & Giering, 2001; Lee et al., 2004; Liao et al., 2007; Mattila, 2006; Naidoo et al., 2011; Parasuraman, 2005; Valle et al., 2006; Yen & Lu, 2008; Yoon & Uysal, 2005). Howat, Crilley and Mcgrath (2008) measured loyalty intention with three questions: (1) To what extent would you recommend this centre to others? (2) Do you intend to visit this centre again in the near future? And (3) If there is another centre available to you, would you be likely to use it instead of this centre? In the current study, loyalty intention of climbers were asked to those who had just completed the ascent and the descent of Mount Kinabalu. Participants were asked about their intention to revisit Mount Kinabalu, recommend it to others and encourage friends and others to climb (Table 3.9). Responses are rated on a 5-point Likert scale ranging from 1 being "very unlikely" to 5 being "very likely".

Table 3.9

Loyalty Intention Questionnaire

Code	Item
	I will ...
Loy1	Share my experiences of climbing Mount Kinabalu with others
Loy2	Recommend Mount Kinabalu climb to others
Loy3	Encourage friends and others to climb Mount Kinabalu
Loy4	Consider climbing Mount Kinabalu again in the future

3.5.8 Personality

Personality constitutes the stable characteristics of a person such as feelings, thoughts, and behaviour that help to differentiate one person from another (Phares, 1991). In 1961, Tupes and Christal proposed the FFM that was recognised as the basis for "an adequate taxonomy of personality" and many studies have been conducted based on this model (Barrick et al., 2003; Caprara, Barbaranelli, & Borgogni, 1993; Loehlin et al., 1998; McCrae & Costa Jr,

1987; McCrae & John, 1992). The FFM model organized personality traits into five basic dimensions: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience (McCrae & John, 1992). These dimensions can be found in all personality instruments (Block, 1995; McCrae & John, 1992).

Several instruments to measure personality were derived from the FFM. The NEO Personality Inventory Revised (NEO-PI-R) by Costa and McCraes (1992) is the most comprehensive. It contains the Big-Five domains with five traits in each dimension. There are some questionnaires which can measure personality with fewer questions than NEO-PI-R (Gosling, Rentfrow, & Swann, 2003; Rammstedt & John, 2007). However, Rammstedt and John (2007) believed that short measures cannot be used for regular personality assessments.

The current study used NEO-PI-R to measure personality of the tourists (Table 3.10). Each of the five dimensions is measured with 5 questions. All the questions were positively worded except five questions for neuroticism which were negatively worded. Responses are rated on a 5-point Likert scale ranging from 1 being “very inaccurate” to 5 being “very accurate”.

Table 3.10

Measure of Personality

Personality	Item
Neuroticism 1	I rarely get irritated.
Neuroticism 2	I seldom feel blue.
Neuroticism 3	I feel comfortable with myself.
Neuroticism 4	I am not easily bothered by things.
Neuroticism 5	I am very pleased with myself.
Extraversion 1	I feel comfortable around people.
Extraversion 2	I make friends easily.
Extraversion 3	I am skilled in handling social situations.
Extraversion 4	I am normally the life in a party.
Extraversion 5	I know how to captivate people.
Openness to Experience 1	I believe in the importance of art.
Openness to Experience 2	I have a vivid/strong imagination.
Openness to Experience 3	I tend to vote for liberal political candidates.
Openness to Experience 4	I carry the conversation to a higher level.
Openness to Experience 5	I enjoy hearing new ideas.
Agreeableness 1	I have a good word for everyone.
Agreeableness 2	I believe that others have good intentions.
Agreeableness 3	I accept others.
Agreeableness 4	I accept people as they are.
Agreeableness 5	I make people feel at ease.
Conscientiousness 1	I am always prepared.
Conscientiousness 2	I pay attention to details.
Conscientiousness 3	I get chores done right away.
Conscientiousness 4	I carry out my plans.
Conscientiousness 5	I make plans and stick to them.

3.5.9 Spirituality

There are many questionnaire instruments to measure spirituality. Among examples are: the Prague Spirituality Questionnaire (PSQ) (Rican & Janosova, 2005), Spiritual Well-being Scale (SWB) (Ellison, (1983), Self-Transcendence Scale (STS) (Reed, (1991), Spirituality Subscale of the Mental, Physical and Spiritual Well-being Scale (MPS) (Vella-Brodrick & Allen, (1995), Spiritual Well-Being Scale of the Functional Assessment of Chronic Illness Therapy (FACIT-Sp-12) (Brady et al., (1999), Transformative Experience Questionnaire (TEQ) (Mansager & Eckstein, (2002), Spirituality well-being model (SWBQ) (Fisher, (1998), and Spiritual Health and Life Orientation Measure (Fisher, (2010), which applied SWBQ, and called SHALOM with 20 questions.

The SHALOM is made up of two components – the Spiritual Health Measure (SHM) and the Life-Orientation Measure (LOM). The SHM enquires people about their lived experience. The LOM states ideals for spiritual health in four sets of relationships with self (personal well-being), others (communal well-being), environment (environmental well-being) and God (transcendental well-being) (Fisher, 2010).

In the current study, spirituality was assessed by the SHM component of the SHALOM questionnaire (Fisher, 2011). The instrument consists of 20 items with five items for each of the four domains of SHM (Table 3.11). Responses are rated on a 5-point Likert scale ranging from 1 being “very low” to 5 being “very high”.

Table 3.11

Measurement of Spirituality Well Being Questionnaire Called SHALOM

Spirituality	Item
Personal 1	sense of identity
Personal 2	self-awareness
Personal 3	joy in life
Personal 4	inner peace
Personal 5	meaning in life
Environmental 1	connection with nature
Environmental 2	awe at a breath taking view
Environmental 3	oneness with nature
Environmental 4	harmony with the environment
Environmental 5	sense of 'magic' in the environment
Communal 1	love of other people
Communal 2	forgiveness toward others
Communal 3	trust between individuals
Communal 4	respect for others
Communal 5	kindness toward other people
Transcendental 1	personal relationship with the Divine/God
Transcendental 2	worship of the Creator
Transcendental 3	oneness with God
Transcendental 4	peace with God
Transcendental 5	prayer life

3.6 Content Validity and Face Validity

Norland (1990) defined validity as the amount of systematic or built-in error in every measurement. A valid questionnaire measures what it is intended to measure. Content validity can be measured using a panel of experts and a field test (Norland, 1990). In the current study, a draft questionnaire was sent to a panel of experts to get feedback on the questionnaire. The five-member academic panel of experts with mountain climbing experience confirmed its content validity. Changes were made to the questionnaire based on

comments and suggestions from the experts. For example, they suggested changing the wording to the past tense, splitting a question into two parts, and clarified some questions.

A pre-test was conducted to measure face validity. Five respondents with mountain climbing experience completed the questionnaire to evaluate whether questions were understandable and easy to answer. Comments and suggestions which were suggested by the pre-test respondents were taken into consideration in the design of the revised instrument. The questionnaire was revised before establishing reliability through a pilot study.

3.7 Pilot Study

Reliability is the repeatability or consistency of the measures (Charles, 1998). A pilot study was conducted to collect data from participants who were not part of the main study. In the current study, questionnaires were distributed to 120 climbers at Mount Kinabalu. Nine climbers did not complete the questionnaire and four did not return it. Reliability was conducted on the 107 completed questionnaires. The data were analysed using item-total correlations and reliability estimations.

Respondents were climbers aged 18 years old and older who had just completed climbing Mount Kinabalu. Table 3.12 shows the demographic characteristics of the respondents in the pilot study. More than half (58.3%) of them were male. Most (81.5%) of the respondents were single, 10.2 % of them were married with children, 6.5% were married without children and 1.9% were divorced or widowed. Respondents were aged between 18 to 56 (29.13 ± 7.8) years old. The majority of the respondents had a university education (51.9% held a bachelor's degree and 21.3% had post-graduate qualification), 11.1% with diploma, and 8.3% with only secondary school (or less) education. The majority (87%) of

the climbers were climbing Mount Kinabalu for the first time, 4.6% had climbed it once before, 5.6% had climbed 2 to 5 times, and 2.8% had climbed more than 5 times.

Table 3.12

Demographic Characteristics in Pilot Study

Demographic characteristics	Frequency	Percentage (%)
Gender		
Male	63	58.3%
Female	45	41.7%
Marital status		
Single	88	81.5%
Married without children	7	6.5%
Married with children	11	10.2%
Divorced/Widowed	2	1.9%
Highest educational achievement		
Secondary (or less)	9	8.3%
Diploma	12	11.1%
Bachelor degree	56	51.9%
Post-graduate	23	21.3%
Others	8	7.4%
How many times climbed at Mount Kinabalu		
First time	94	87.0%
Climbed once before	5	4.6%
Climbed 2 to 5 times	6	5.6%
Climbed more than 5 times	3	2.8%
Experience in mountain climbing		
Novice	63	58.3
Intermediate	34	31.5
Experienced	10	9.3
Any other outdoor activity		
Yes	77	71.3
No	28	25.9
Missing	3	2.8

3.8 Step 2: Exploratory Study

Koufteros (1999) and Lu et al. (2007) believed that Cronbach's alpha is one of the most widely used metrics for reliability evaluation. Alpha values between 0.5 to 0.6 shows sufficient reliability whereas an alpha value of 0.7 or above is acceptable and a good indication of reliability (Nunnally & Bernstein, 1994).

Another measurement to establish reliability is the corrected item-total correlation (CITC) of each measurement scale. Nunnally (1978) argued that "the items that correlate most highly with total scores are the best items for a general-purpose test" (p. 279). The CITC refers to "a correlation of an item or indicator with the composite score of all the items forming the same set" (Koufteros, 1999, p. 471). Items with an item-total correlation value of less than 0.25 is usually considered for elimination (Nunnally & Bernstein, 1994).

Cronbach's alpha and corrected item-total correlations were calculated for three unidimensional constructs (PBC, satisfaction, loyalty intention) and five dimensional constructs (responsible mountaineering behaviour, attitude towards behaviour, norms, personality and spirituality) and presented in Table 3.13.

Table 3.13

Corrected Item-total correlations (CITC) for constructs in pilot study (n = 107)

Responsible Behaviour (α=.789)	Attitude towards behaviour (α=.837)	Subjective Norm (α=.781)	Perceived behavioural control (α=.706)	Satisfaction (α=.814)	Loyalty Intention (α=.865)	Personality (α=.782)	Spirituality (α=.911)
RB1=.231	ATT1=.419	SN1=.437	PBC1=.422	SAT1=.610	LOY1=.502	PER1=.510	SP1=.520
RB2=.259	ATT2=.472	SN2=.343	PBC2=.432	SAT2=.734	LOY2=.659	PER2.2=.167	SP2=.686
RB3=.213	ATT3=.431	SN3=.326	PBC3=.309	SAT3=.771	LOY3=.630	PER3=.431	SP3=.577
RB4=.379	ATT4=.468	SN4=.409	PBC4=.280	REC-Sat4.4 =.346	LOY4=.206	PER4.4=-.437	Sp4=.530
RB5=.309	ATT5=.429	SN5=.456	PBC5=.278	SAT5=.585		PER5=.437	SP5=.440
RB6=.024	ATT6=.457	SN6=.666				PER6=.588	SP6=.636
RB7=.251	ATT7=.557	SN7=.709				PER7=.542	SP7=.357
RB8=.358	ATT8=.232	SN8=.552				PER8=.507	SP8=.476
RB9=.434	ATT9=.325					PER9=.473	SP9=.502
RB10=.438	ATT10=.217					PER10=.563	SP10=.541
RB11=.367	ATT11=.434					PER11=.432	SP11=.692
RB12=.465	ATT12=.389					PER12=.505	SP12=.610
RB13=.539	ATT13=.407					PER13.13=-.286	SP13=.692
RB14=.575	ATT14=.366					PER14.14=-.313	SP14=.511
RB15=.412	ATT15=.403					PER15=.300	SP15=.636
RB16=.283	ATT16=.429					PER16=.607	SP16=.623
RB17=.235	ATT17=.421					PER17=.597	SP17=.514
RB18=.422	ATT18=.426					PER18=.454	SP18=.620
RB19=.375	ATT19=.439					PER19=.521	SP19=.544
RB20=.361	ATT20=.436					PER20=.525	Sp20=.462
RB21=.391	ATT21=.398					PER21=.390	
RB22=.336						PER22=.405	
RB23=.365						PER23=.286	
						PER24.24=-.436	
						PER25=.354	

As shown in Table 3.13, attitude towards behaviour had the highest Cronbach's alpha value (0.837) and PBC had the lowest (0.706). After deleting one item from loyalty intention, the alpha value increased from 0.647 to 0.865. The other alpha values were higher than 0.7 which is considered sufficient (Nunnally & Bernstein, 1994). This shows that the measurement of the pilot study had an adequate level of reliability.

With regard to the corrected item-total correlation, some items (RB1, RB3, RB6, RB17, ATT10, ATT8 and PER2.2) had very low correlation with related factors. Although it is suggested that items with less than 0.25 are usually considered for elimination (Nunnally & Bernstein, 1994), they were not eliminated at this stage because these items were from instruments (responsible behaviour, attitude and personality) which had acceptable reliability. The correlation of these items might be improved if a big sample was used. In the next stage, an Exploratory Factor Analysis (EFA) was conducted with 300 respondents.

3.9 Data Collection Process

Data were collected from 14 March to 14 April 2013, during the dry season which is considered the best season for climbing Mount Kinabalu (Ling et al., 2007). There were 4,894 climbers who summited the mountain that month. Of these climbers, an estimate of 2,250 visited the restaurant at the base of the mountain after their climb to rest, where free food and drink is provided.

We calculated the minimum sample size using the formula proposed by Bowerman, O'Connell and Orris (2004) which is $N = p(1 - p)(Z\alpha/2/B)^2$. In this formula, N is sample size, $Z\alpha/2$ is the confidence level, and B is the error tolerance. Bowerman et al. (2004) suggested that p should be .5, $Z\alpha/2$ be 1.96 and B be .07. Based on this formula, the representative sample for Mount Kinabalu climbers is 196. However, SEM requires a

minimum sample size of not less than 200 respondents for influence parameter estimation (Arbuckle, 2008, p. 604; Byrne, 2010, p. 305; Veasna, Wu, & Huang, 2013). Therefore, all the climbers who visited the restaurant were invited to participate in the study. Those who agreed were provided with a pen as a token of appreciation. They were asked to return the completed questionnaire to the researcher who was stationed at the rest area of Mount Kinabalu Park.

During that one month period, the researcher distributed a total of 950 questionnaires to climbers who agreed to answer the questionnaire. Of the 2,250 climbers, a total of 950 of them agreed to answer the questionnaires during the one month data collection period. Therefore the response rate was 42.5%. The rather high response rate could be the result of the data collection location, which provides captive atmosphere for the purpose. Despite the exhaustion, following the two arduous climbing days, many climbers was happy to share their experiences with the researcher. The researcher facilitated the answering of the questionnaire by staying close by and was available to answer any query related to the questionnaire. This method produced a high rate of completed questionnaires, whereby 916 climbers (96.4%) returned completed questionnaires and only 34 climbers (3.6%) did not complete the questionnaire. Gagne and Hancock (2006) and Choi (2010) highlighted that CFA and SEM required the accessibility to large sample sizes. The large sample size increases likelihood of a correct model convergence, decreases Type I and Type II errors and enhances accuracy of estimated standard errors and parameter estimates.

Koufteros (1999) suggested that using a separate sample is useful to re-evaluate parameters of a proposed model and provided the opportunity to conduct further data analysis. Therefore, this study utilised a separate sample of 300 respondents to conduct EFA and 616 respondents to perform CFA and SEM to test the conceptual model.

3.10 Step 3: Exploratory Factor Analysis

Gerbing and Anderson (1988) stated that EFA is a useful technique for scale development by decreasing a large number of items or indicators to a more manageable set. Churchill (1979) believed that factor analysis can be utilised to suggest dimensions and corroborate the number of conceptualized dimensions. In this process, "scales are formed by assigning to the same scale the items that load at least moderately on the same factor (e.g., .4) and do not load as highly on other factors" (Gerbing & Anderson, 1988, p. 189) .

In the current study, EFA was applied to determine dimensions of responsible behaviour, attitude towards behaviour, subjective norm and PBC. EFA was not performed on constructs of personality and spirituality which have established dimensions from previous studies (Fisher, 2010; Ong & Musa, 2012). The purpose of EFA in the current study was to find the best correlation between observed variables by decreasing the number of items and to identify a manageable set of latent variables through varimax rotation. The eigenvalue of 1.0 for factor inclusion and a factor loading of .40 was applied as the benchmark to use items in each factor (Hair, Anderson, Tatham, & Black, 1998).

3.10.1 Attitude towards Behaviour

For the attitude towards behaviour construct, 21 items were derived from the previous stage which was initial reliability and item-total correlation. To explore the underlying dimensions of attitude towards behaviour, three factors with eigen values above 1.0 explained 56.92% of the variance (Table 3.14). The factors were labelled knowledge, awareness and commitment which were employed in the measurement model as endogenous constructs.

Following the factor analysis, three items (ATT7 = Knowledge about high risk places on the mountain, ATT9 = Aware of mountain guides are the best people to lead you to the

peak and ATT16 = I think about mountain climbing a lot) were deleted because of low factor loadings. The factor loadings for the other items (18 items) were higher than the threshold value of 0.40 (Hair et al., 1998), ranging from 0.48 to 0.85. The Cronbach's alphas for the three factors (0.831) were satisfactory. The mean score for awareness was higher (mean = 4.25) than knowledge (mean = 3.32) and commitment (mean = 2.30). Thus, the attitude towards behaviour among respondents was high on awareness, moderate on knowledge and low on commitment. The factor loading for attitude towards behaviour is presented in Table 3.14.

Table 3.14

Factor Loading for Attitude towards Behaviour (N = 300)

Attitude towards behaviour (α=0.831)	Factor 1 Awareness M = 4.25	Factor 2 Knowledge M = 3.32	Factor 3 Commitment M = 2.30
ATT.A7: The wind chill factors will drop the temperature to a much lower level	.779		
ATT.A4: The need to be careful, calm and steady when climbing	.752		
ATT.A6: The rock face can be very slippery when it rains	.746		
ATT.A5: The weather may change drastically in the mountain	.741		
ATT.A8: In thick cloud the visibility could be close to zero	.657		
ATT.A3: The danger of climbing alone	.612		
ATT.A1: Hypothermia can be avoided by wearing warm clothing	.483		
ATT.K2: Pre-climb instructions		.797	
ATT.K3: Pre-climb requirements		.767	
ATT.K1: Mountain climbing safety practices		.757	
ATT.K6: Skills required for climbing		.719	
ATT.K4: Mental preparation before climbing		.682	
ATT.K5: Weather conditions before climbing		.584	
ATT.C4: I like to be an active member of a mountaineering club			.853
ATT.C5: I like to give donations to mountaineering organizations to support their activities			.830
ATT.C2: I often talk and share mountain climbing experiences with my friends			.796
ATT.C6: I buy a lot of books/magazines about mountain climbing			.764
ATT.C3			.738
Number of items	7	6	5
% of variance	26.97	20.16	9.79
Cronbach's alpha	0.809	0.842	0.869
Cumulative%	56.92%		

3.10.2 Responsible Mountaineering Behaviour

With regard to the responsible mountaineering behaviour construct, 23 items were adapted in the previous analysis (initial reliability and item-total correlation). To determine the pre-

specified dimensions of responsible behaviour, four factors were derived with eigen values above 1.0, and explained 57.80% of the variance (Table 3.15). The four factors were conceptualised as clothing requirement, food and drink requirement, equipment requirement, and obedience requirement which employed in the measurement model as exogenous constructs. Following the factor analysis, nine items were deleted (RB1 = Aware of my exact position on the mountain trail, RB2 = Not in a hurry, RB3 = Rest whenever necessary, RB5 = Help other climbers in difficulty, RB6 = Walk away from my group, RB8 = Keep myself clean/hygienic in the mountain, RB20 = Use sun block, and RB22 = Use sunglasses and RB23 = Use a hat).

Table 3.15

Factor Loading for Responsible Mountaineering Behaviour (N = 300)

Responsible mountaineering behaviour (α = 0.711)	Factor 1 M = 4.33	Factor 2 M = 4.02	Factor 3 M = 2.22	Factor 4 M = 3.51
RB13: Have enough warm clothing	.720			
RB15: Carry a torch light	.716			
RB14: Wear comfortable climbing shoes/boots	.674			
RB16: Carry a rain coat/waterproof jacket	.616			
RB19: Wear adequate warm clothing to avoid hypothermia	.573			
RB9: Drink enough water during the climb		.798		
RB10: Consume high energy food during the climb		.788		
RB17: Carry a whistle			.790	
RB21: Carry a compass			.726	
RB12: Carry a first aid kit			.563	
RB4: Follow the mountain guide				.786
RB11: Inform my mountain guide if I have any health problems				.699
Number of items	5	2	3	2
% of variance	26.78	13.19	8.97	8.87
Cumulative%	57.80%			

Factor loadings for the rest of items (12 items) ranged from 0.56 to 0.79. The Cronbach's alpha for the four factors (0.711) was higher than 0.60 which is acceptable at the exploratory stage (Nunnally & Bernstein, 1994). The mean score for clothing requirement was the highest (mean = 4.33), followed by food and drink requirement (mean = 4.02), obedience requirement (mean = 3.51) and equipment requirement (mean = 2.22). In summary, responsible behaviour among respondents was high on clothing requirement and food and drink requirement, moderate on the obedience requirement and low on the equipment requirement.

3.10.3 Norms

In the case of norms, a preliminary analysis of reliability and item-total correlation were represented by eight items. To determine the underlying dimensions of norms, two factors were derived with eigen values above 1.0, and explained 62.30% of the variance (Table 3.16). The factors were labelled as media norm and subjective norm. Factor loadings for eight items ranged from 0.63 to 0.89. The Cronbach's alphas for the two factors (0.82) are higher than 0.60 which was acceptable at the exploratory stage (Nunnally & Bernstein, 1994). The mean score for subjective norm (3.20) is higher than media norm (2.59). In summary, despite the emerging importance of media norms, the influences of subjective norms remain superior.

Table 3.16

Factor Loading for Norms (N= 300)

Norms (α = 0.816)	Factor 1 M = 2.59	Factor 2 M = 3.20
SN6: Information from mountain climbing websites (eg. www.mountaintrip.com, www.summitclimb.com, etc)	.891	
SN7: Information from mountain climbing magazines (eg. Climbing, Alpinist, Climb, etc)	.847	
SN8: Information from destination specific websites (eg. www.sabahtourism.com, www.mountkinabalu.my, etc)	.772	
SN5: Information from social media (eg. Facebook, Twitter, YouTube, Blog, etc)	.735	
SN2: Other climbers		.775
SN1: Climbing partners/ group members		.763
SN3: Family members		.701
SN4: Mountain guides		.625
Number of items	4	4
% of variance	44.22	18.08
Cronbach's alpha	.850	.719
Cumulative%	62.30%	

3.10.4 Perceived Behavioural Control

For the construct of PBC, initial analysis in the pilot study showed that reliability was sufficient and item-total correlation allowed all items to be used in next section. The five items in PBC did not show any dimension and were observed with eigen values above 1.0 explaining 63.93% of the variance. PBC as a first order factor with α =.77 was sent to the next step of analysis. The factor loading for PBC is presented in Table 3.17.

Table 3.17

Factor loading for PBC (N = 300)

Perceived Behavioural Control	Item
PBC1: It is just too difficult for someone like me to do much about my own safety/health during the climb	.902
PBC2: There is no point in doing what I can for safety/health during the climb, unless others do the same	.892
PBC4: My group members are committed to looking after each other on the mountain	.797
PBC5: I trust that my mountain guide will look after my safety on the mountain	.769
PBC3: I am very able to look after myself and my health on the mountain	.569
Number of items	5
Cronbach's alpha	.770
Cumulative%	63.93%

3.10.5 Satisfaction

In relation to the satisfaction construct, preliminary analysis presented five items (without any discarded items) in the pilot study. The EFA analysis did not divide this construct into different dimensions. Therefore satisfaction with five items was observed with eigen values above 1.0 explaining 62.44% of the variance. The factor loading for satisfaction is presented in Table 3.18.

Table 3.18

Factor Loading for Satisfaction (N = 300)

Satisfaction	Item
SAT3: I truly enjoyed this vacation in Mount Kinabalu	.908
SAT2: I am satisfied with my decision to climb Mount Kinabalu	.893
SAT1: This climbing trip is exactly what I need	.792
SAT5: I am sure it is right to spend my holiday climbing Mount Kinabalu	.780
SAT4.4: I am not happy with my decision to climb Mount Kinabalu	.514
Number of items	5
% of variance	62.44%
Cronbach's alpha	.818
Cumulative%	62.44%

3.10.6 Loyalty Intention

In the case of loyalty intention, after testing for reliability and item-total correlation, one item was discarded from this construct. Following EFA, three items did not show any dimension and was observed with eigen values above 1.0 which explained 79.76% of the variance. The loading factor for loyalty intention is presented in Table 3.19.

Table 3.19

Factor Loading for Loyalty Intention (N = 300)

Loyalty Intention	Items
LOY2: Recommend Mount Kinabalu climb to others	.942
LOY3: Encourage friends and others to climb Mount Kinabalu	.918
LOY1: Share my experiences of climbing Mount Kinabalu with others	.814
Number of items	3
% of variance	79.76%
Cronbach's alpha	.871
Cumulative%	79.76%

Item-total correlation and EFA were conducted during the preliminary analysis without an adequate theoretical base because they cannot directly determine unidimensionality (Gerbing & Anderson, 1988; Lu et al., 2007). With respect to this, a CFA was performed in the next step. Validity of the questionnaire was tested by convergent validity, fit indices and unidimensionality assessment, discriminant validity and construct reliability. The measurement model from the questionnaire validation procedure was then used for the main data collection (616 respondents) where SEM was performed to test the conceptual model.

3.11 Step 4: Confirmatory study

Although exploratory application might be satisfactory during primary sections of research on a construct, the use of factor analysis in a confirmatory method would be better at the later section (Churchill, 1979). Therefore, in this part of the study, CFA was conducted to evaluate the measurement model by unidimensionality, convergent validity, discriminant validity and construct reliability. In addition, CFA was performed with SEM using the AMOS 21.0 software on 616 respondents to test dimensions of constructs for personality, spirituality, satisfaction, attitude, norms, PBC, responsible behaviour and loyalty intention.

The confirmatory measurement model should be examined and re-specified before the measurement and structural equation model are evaluated simultaneously (Gerbing & Anderson, 1988; Lu et al., 2007; Ong & Musa, 2011a; Yoon & Uysal, 2005). Therefore, each construct in the model is evaluated separately before testing the measurement model. Fit statistics were applied and generated to examine the satisfactoriness and adequacy of each of the factor models which were adapted from CFA. In the current study each construct was tested with multiple fit criteria such as: Chi-square statistics (x^2), degree of freedom (df), P-value, Relative Chi-square (x^2/df), Adjusted Goodness of Fit Index (AGFI), Goodness of Fit Index (GFI), Comparative Fit Index (CFI), Incremental index of Fit (IFI) and Root Mean Square Error of Approximation (RMSEA) (El-Gohary, 2012).

One of the first items that determine fit statistics is the x^2/degrees of freedom ratio and appears as CMIN/DF which refers to the subjective, practical, or ad hoc indices of fit (Byrne, 2013). The AGFI and GFI are known as absolute indices of fit because they can compare the hypothesized model with no model. The indices range from 0 to 1.00, with values close to 1.00 representing a good fit (Byrne, 2013). The value for CFI range from 0 to 1.00 and derived from the comparison of a hypothesized model with the independence model

(Byrne, 2013). According to Browne et al. (1993) RMSEA answers the question "How well would the model, with unknown but optimally chosen parameter values, fit the population covariance matrix if it were available?" (p. 137-138). RMSEA values of less than .06 indicate a good fit (Hu & Bentler, 1998) and values up to .08 indicate reasonable errors of approximation in the population (Browne et al., 1993), values between .08 to .10 represent mediocre fit and values of .10 indicate poor fit. The results for all constructs for 616 respondents is presented in the following chapter.

3.12 Summary

This chapter discusses the research design, methodology and data collection process. A quantitative research method was used to collect the data through survey questionnaire. As parts of the instrument were adapted or self-developed, establishing the validity of the measurement was essential. This process employed four steps which are instrument development, exploratory study, EFA and CFA. The validated questionnaire which was modified based on EFA and CFA was used in the main data collection.

CHAPTER 4: RESULTS AND DATA ANALYSIS

4.1 Introduction

This chapter presents research data, findings and analysis. A CFA was carried out to examine the unidimensionality, reliability and validity of the constructs in the measurement model. SEM was used to investigate the relationship among constructs (i.e. personality, spirituality, satisfaction, attitude towards behaviour, norms, PBC, responsible mountaineering behaviour, and loyalty intention).

4.2 Profile of Respondents

Respondents filled in the following demographic information: (a) nationality, (b) gender, (c) marital status, (d) age, (e) highest educational achievement, (f) frequency of climbing Mount Kinabalu, (g) experience in mountain climbing, (h) mountains they have climbed before, (i) outdoor activity, and (j) physical activity level.

Table 4.1 shows the nationality of the respondents. They were from 35 different countries with nearly half (43.2%) from Malaysia. Foreign climbers were mainly from the United Kingdom (8.8%), Australia (5.5%), Singapore (3.7%) and Germany (2.9%).

Table 4.1

Nationality of Respondents

Nationality	Frequency	Percentage	Nationality	Frequency	Percentage
American	13	2.1	Italian	2	0.3
Austrian	3	0.5	Japanese	6	1.0
Australian	34	5.5	Mexican	3	0.5
British	54	8.8	Malaysian	266	43.2
Belgian	6	1.0	New Zealander	1	0.2
Chinese	9	1.5	Norwegian	4	0.6
Canadian	14	2.3	Polish	5	0.8
Croatian	2	0.3	Pakistani	1	0.2
Danish	15	2.4	Sri Lankan	1	0.2
Dutch	8	1.2	Singaporean	23	3.7
French	16	2.6	Swedish	12	1.9
Filipino	13	2.1	South Korean	4	0.6
German	18	2.9	Swiss	6	1.0
Hungarian	1	0.2	Taiwanese	3	0.5
Hong Konger	4	0.6	Thai	3	0.5
Indonesian	1	0.2	Vietnamese	1	0.2
Icelander	1	0.2	Missing	59	9.6
Irish	4	0.6	Total	616	100

Table 4.2 shows the demographic profile of the respondents. There were more male respondents (62.7%) than female (37.3%). The majority of respondents were single (66.7%) whereas 19.2% were married with children, 11.5% were married without children and 2.1% were either divorced or widowed. Most of the respondents were young with 81.8% of them between 18 to 40 years old. Only 9.7% of them were between 41-50 years old and just 5.6% older than 50 years old.

Table 4.2

Profile of Respondents

Demographic characteristics	Frequency	Percentage (%)
Gender		
Male	386	62.7
Female	230	37.3
Marital status		
Single	411	66.7
Married without children	71	11.5
Married with children	118	19.2
Divorced/Widowed	13	2.1
Missing	3	0.5
Age		
18-30	348	56.6
31-40	156	25.2
41-50	60	9.7
>50	34	5.6
Missing	18	2.9
Highest educational achievement		
Secondary (or less)	99	16.1
Diploma	125	20.3
Bachelor degree	252	40.9
Post-graduate	101	16.4
Others	34	5.5
Missing	5	0.8
Times climbed Mount Kinabalu		
First time	509	82.6
Climbed once before	26	4.2
Climbed 2 to 5 times	59	9.6
Climbed more than 5 times	21	3.4
Missing	1	0.2
Experience in mountain climbing		
Novice	308	50.0
Intermediate	213	34.6
Experienced	88	14.3
Missing	7	1.1
Number of mountains that climbed before		
0	247	40.1
1	133	21.6
2-5	142	23.1
>5	11	1.8
Missing	83	13.5
Any other outdoor activity		
Yes	468	76.0
No	139	22.6
Missing	9	1.5
Physical activity Level		
High	324	52.6
Moderate	222	36.0
Low	70	11.4

More than half (57%) of climbers hold a bachelor's degree or higher. Most (82.6%) of the climbers climbed Mount Kinabalu for the first time and half of them regarded themselves as novice climbers. Nearly half (46.5%) of the respondents have climbed mountains which were over 2,500m.

The majority of respondents were active with 76% participating in other outdoor activities like hiking, biking, running and diving. Table 4.3 shows the 46 outdoor activities which respondents participated in.

Table 4.3

Outdoor Activity of Respondents

Outdoor Activity	Frequency (Percentage)	Outdoor Activity	Frequency (Percentage)
Badminton	11 (1.8)	Photography	2 (0.3)
Biking	15 (2.4)	Paragliding	5 (0.8)
Basketball	9 (1.5)	Paint Ball	3 (0.5)
Backpacking	1 (0.2)	Running	50 (8.1)
Cycling	43 (7.0)	Rock Climbing	18 (2.9)
Cricket	3 (0.5)	Rugby	1 (0.2)
Canoeing	1 (0.2)	Sports	7 (1.1)
Camping	5 (0.8)	Snowboarding	4 (0.6)
Dancing	1 (0.2)	Scouting	1 (0.2)
Diving	24 (3.9)	Snorkelling	2 (0.3)
Futsal	8 (1.3)	Sailing	6 (1.0)
Football	13 (2.1)	Soccer	6 (1.0)
Fishing	6 (1.0)	Surfing	9 (1.5)
Flying Fox	1 (0.2)	Skiing	16 (2.6)
Gym	1 (0.2)	Swimming	27 (4.4)
Golf	5 (0.8)	Skateboarding	2 (0.3)
Hockey	1 (0.2)	Travelling	1 (0.2)
Hiking	32 (5.2)	Tennis	6 (1.0)
Horse Riding	6 (1.0)	Volleyball	5 (0.8)
Jogging	30 (4.9)	White Water Rafting	9 (1.5)
Jungle Trekking	12 (1.9)	Walking	18 (2.9)
Kayak	11 (1.8)	Missing	28 (4.5)
Lifesaving	1 (0.2)	No	139 (22.6)
Mountain Climbing	6 (1.0)	Total	616 (100)
Marathon	5 (0.8)		

4.3 Descriptive Analysis of Respondents with Respect to Constructs

This section presents the results of the eight constructs (spirituality, personality, attitude towards behaviour, responsible mountaineering behaviour, norms, PBC, satisfaction and loyalty intention) in the questionnaire.

4.3.1 Spirituality

Results for the spirituality construct of the climbers are presented in Table 4.4. The climbers had an overall mean score of 3.64 ± 0.66 for spirituality. In terms of the four spirituality dimensions, climbers had the highest mean score for personal (3.90 ± 0.75), followed by communal (3.85 ± 0.63), environmental (3.75 ± 0.71) and transcendental (3.06 ± 1.35).

For the personal dimension, the results of mean scores for the three items ranged from 3.71 to 4.11 (Table 4.4). These results indicated that climbers possessed the highest mean score for 'joy in life' (4.11 ± 0.86), followed by 'meaning in life' (3.89 ± 0.94) and 'inner peace' (3.71 ± 0.99).

With regard to the communal dimension, the results of mean scores for the three items ranged from 3.83 to 3.87 The results indicated that climbers are moderately involved for all three items in the communal dimension: 'love of other people' (3.87 ± 0.82), 'trust between individual' (3.84 ± 0.83) and 'forgiveness toward others' (3.83 ± 0.83).

For the environmental dimension, the mean scores for the five items ranged from 3.37 to 3.95 .The results indicated that climbers are moderately involved in feelings about the environment such as: 'awe at a breath-taking view' (3.95 ± 0.90), 'connection with nature' (3.90 ± 0.92), 'harmony with the environment' (3.84 ± 0.92), 'oneness with nature' (3.69 ± 0.97) and 'sense of 'magic' in the environment' (3.37 ± 1.20).

For the transcendental dimension, the results of mean scores for the five items ranged from 3.19 to 2.83. The results indicated that climbers are moderately involved in feeling

about the transcendental such as: ‘peace with God’ (3.19 ± 1.51), ‘personal relationship with the Divine/God’ (3.14 ± 1.44), ‘worship of the Creator’ (3.10 ± 1.44), ‘oneness with God’ (3.03 ± 1.48) and ‘regular prayer’ (2.83 ± 1.50).

Table 4.4

Descriptive Analysis of Spirituality (N = 616)

Construct: Spirituality	Mean = 3.64	SD = 0.66
Personal	3.90	0.75
SP18- meaning in life	3.89	0.94
SP16- inner peace	3.71	0.99
SP14- joy in life	4.11	0.86
Communal	3.85	0.64
SP8- trust between individuals	3.84	0.83
SP3- forgiveness toward others	3.83	0.83
SP1- love of other people	3.87	0.82
Environmental	3.75	0.71
SP20- sense of ‘magic’ in the environment	3.37	1.20
SP12- harmony with the environment	3.84	0.92
SP10- oneness with nature	3.69	0.97
SP7- awe at a breath taking view	3.95	0.90
SP4- connection with nature	3.90	0.92
Transcendental	3.06	1.35
SP15- regular prayer	2.83	1.50
SP13- peace with God	3.19	1.51
SP11- oneness with God	3.03	1.48
SP6- worship of the Creator	3.10	1.44
SP2- personal relationship with the Divine/God	3.14	1.44

Note: SP = Spirituality
Scale: 1- very low, 3- moderate, 5- very high.

4.3.2 Personality

Personality was represented by five dimensions: “Agreeableness”, “Extraversion”, “Conscientiousness”, “Neuroticism” and “Openness to Experience”. The means and standard deviations of this construct are presented in Table 4.5. Climbers had an overall mean score of 3.54 ± 0.41 for personality. The highest score was for agreeableness (3.86 ± 0.57) followed by openness to experience (3.85 ± 0.62), extraversion (3.62 ± 0.70), conscientiousness (3.58

± 0.67) and neuroticism (2.03 ± 0.69). The data show that climbers were more likely to possess personality characteristics of agreeableness, openness to experience, extraversion and conscientiousness. However, climbers were less likely to possess neuroticism as personality traits.

For the agreeableness dimension, the mean scores for the five items ranged from 3.60 to 4.31 (Table 4.5). These results indicated that climbers possess the highest mean score in 'I accept others' (4.31 ± 0.76) and 'I accept people as they are' (3.99 ± 0.84). Climbers described themselves as moderately accurate in 'I believe that others have good intentions' (3.72 ± 0.88), 'I make people feel at ease' (3.69 ± 0.84) and 'I have a good word for everyone' (3.60 ± 0.86).

For the openness to experience dimension, results of mean score for the three items ranged from 3.57 to 4.20. This showed that climbers describe themselves as accurate 'enjoy hearing new ideas' (4.20 ± 0.78) and moderately accurate in 'have a vivid/strong imagination' (3.77 ± 0.92) and 'carry the conversation to a higher level' (3.57 ± 0.86).

With regard to the extraversion dimension, the mean scores for the four items ranged from 3.34 to 3.80. The results indicated that climbers consider the statements to be moderately accurate with regard to 'I feel comfortable around people' (3.80 ± 0.88), 'I make friends easily' (3.74 ± 0.98), 'I am skilled in handling social situations' (3.58 ± 0.89) and 'I know how to captivate people' (3.34 ± 0.86).

For the conscientiousness dimension, the mean scores for the four items ranged from 3.37 to 3.82. The results showed that climbers describe themselves as moderately accurate in terms of 'I carry out my plans' (3.82 ± 0.81), 'I am always prepared' (3.62 ± 0.93), 'I make plans and stick to them' (3.52 ± 0.91) and 'I get chores done right away' (3.37 ± 0.95).

For the neuroticism dimension, the mean scores for the two items ranged from 1.85 to 2.23. The findings revealed that climbers describe the statements as inaccurate in terms of 'I am very pleased with myself' (2.23 ± 0.84) and 'I feel comfortable with myself' (1.85 ± 0.78).

Table 4.5

Descriptive Analysis of Personality (N = 616)

Construct: Personality	Mean = 3.54	SD = 0.41
Agreeableness	3.86	0.57
PER7- I have a good word for everyone	3.60	0.86
PER11- I believe that others have good intentions	3.72	0.88
PER3- I accept others	4.31	0.76
PER9- I accept people as they are	3.99	0.84
PER20- I make people feel at ease	3.69	0.84
Extraversion	3.62	0.70
PER17- I feel comfortable around people	3.80	0.88
PER1- I make friends easily	3.74	0.98
PER16- I am skilled in handling social situations	3.58	0.89
PER10- I know how to captivate people	3.34	0.86
Conscientiousness	3.58	0.67
PER8- I am always prepared	3.62	0.93
PER18- I get chores done right away	3.37	0.95
PER19- I carry out my plans	3.82	0.81
PER22- I make plans and stick to them	3.52	0.91
Neuroticism*	2.03	0.69
PER4- I feel comfortable with myself *	1.85	0.78
PER24- I am very pleased with myself *	2.23	0.84
Openness to Experience	3.85	0.62
PER5- I have a vivid/strong imagination	3.77	0.92
PER6- I carry the conversation to a higher level	3.57	0.86
PER12- I enjoy hearing new ideas	4.20	0.78

Note: PER = Personality.
Scale: 1- Very Inaccurate, 3- Neutral, 5- Very Accurate.
*= Negatively coded.

4.3.3 Attitude towards Behaviour

Attitude towards behaviour was represented by two dimensions as shown in Table 4.6. The results showed that climbers have an overall mean score of 3.79 ± 0.63 for attitude towards behaviour. They scored higher for awareness (4.27 ± 0.66) than knowledge (3.41 ± 0.89) dimensions.

For the awareness dimension, the mean scores for the six items ranged from 4.03 to 4.49 (Table 4.6). These results indicated that climbers have a great awareness that 'the rock face can be very slippery when it rains' (4.49 ± 0.75). This is followed by 'the need to be careful, calm and steady when climbing' (4.41 ± 0.79), 'the weather may change drastically in the mountain' (4.31 ± 0.87), 'the wind chill factors will drop the temperature to a much lower level' (4.28 ± 0.91), 'the danger of climbing alone' (4.07 ± 1.14) and 'in thick cloud the visibility could be close to zero' (4.03 ± 1.06).

With regard to the knowledge dimension, the mean scores for the seven items ranged from 3.19 to 3.61. The results indicated that climbers score moderately in knowledge about mountain climbing. Therefore, climbers had moderate knowledge about 'mental preparation before climbing' (3.61 ± 1.17), 'pre-climb requirements' (3.49 ± 1.09), 'skills required for climbing' (3.40 ± 1.10), 'weather conditions before climbing' (3.35 ± 1.21), 'pre-climb instructions' (3.30 ± 1.14), 'mountain climbing safety practices' (3.28 ± 1.09) and 'high risk places on the mountain' (3.19 ± 1.32). Generally, having knowledge about the mountain before climbing is essential for climbers as it can promote safety during mountain climbing.

Table 4.6

Descriptive Analysis of Attitude towards Behaviour (N = 616)

Construct: Attitude towards Behaviour	Mean = 3.79	SD = 0.63
Knowledge	3.41	0.89
ATT.K1- Mountain climbing safety practices	3.28	1.09
ATT.K2- Pre-climb instructions	3.30	1.14
ATT.K3- Pre-climb requirements	3.49	1.09
ATT.K4- Mental preparation before climbing	3.61	1.17
ATT.K5- Weather conditions before climbing	3.35	1.21
ATT.K6- Skills required for climbing	3.40	1.10
ATT.K7- High risk places on the mountain	3.19	1.32
Awareness	4.27	0.66
ATT.A3- The danger of climbing alone	4.07	1.14
ATT.A4- The need to be careful, calm and steady when climbing	4.41	0.79
ATT.A5- The weather may change drastically in the mountain	4.31	0.87
ATT.A6- The rock face can be very slippery when it rains	4.49	0.75
ATT.A7- The wind chill factors will drop the temperature to a much lower level	4.28	0.91
ATT.A8- In thick cloud the visibility could be close to zero	4.03	1.06

Note: ATT = Attitude, K = Knowledge, A = Awareness.
Scale: 1- Not at all, 3- To a moderate extent, 5- To a great extent.

4.3.4 Responsible Mountaineering Behaviour

Responsible behaviour in the mountain was represented by four dimensions: "Clothing Requirement", "Food and Drink Requirement", "Equipment Requirement" and "Obedience Requirement". The means and standard deviations for this construct are presented in Table 4.7. Climbers had an overall mean score of 3.57 ± 0.68 for responsible behaviour. The highest score was for clothing requirement (4.27 ± 0.74) followed by food and drink requirement (4.12 ± 0.79), obedience requirement (3.47 ± 1.33) and equipment requirement (2.42 ± 1.23).

The data showed that climbers are more focused on requirements related to clothing, food and drink and obedience but rarely for equipment.

For the clothing requirement dimension, the mean scores for the three items ranged from 4.14 to 4.46 (Table 4.7). The results indicated that climbers score the highest mean for 'wear comfortable climbing shoes/boots' (4.46 ± 0.87) followed by 'have enough warm clothing' (4.22 ± 0.95) and 'wear adequate warm clothing to avoid hypothermia' (4.14 ± 1.11). Therefore, it can be said that climbers paid attention to safety requirements during climbing and were aware of the appropriate clothes and shoes.

In relation to the food and drink requirement dimension, the mean scores for the two items were 4.31 ± 0.84 and 3.95 ± 1.09. This showed that climbers are aware of the importance of drinking enough water during climbing and less aware of the need to consume high energy food during the climb. With regard to the dimension of equipment requirement, the mean scores for the two items were 2.98 ± 1.63 and 1.85 ± 1.42. The results indicated that climbers are less aware about carrying a first aid kit and compass during the climb. In the dimension for obedience requirement, the mean scores were 3.80 ± 1.40 and 3.13 ± 1.97. The results showed that obedience and following the mountain guide are fundamental to all climbers and they will inform the mountain guide when faced with problems.

Table 4.7

Descriptive Analysis of Responsible Mountaineering Behaviour (N = 616)

Construct: Responsible Behaviour	Mean = 3.57	SD = 0.68
Clothing Requirement	4.27	0.74
RB13- Have enough warm clothing	4.22	0.95
RB14- Wear comfortable climbing shoes/boots	4.46	0.87
RB19- Wear adequate warm clothing to avoid hypothermia	4.14	1.11
Food and Drink Requirement	4.12	0.79
RB9- Drink enough water during the climb	4.31	0.84
RB10- Consume high energy food during the climb	3.95	1.09
Equipment Requirement	2.42	1.23
RB12- Carry a first aid kit	2.98	1.63
RB21- Carry a compass	1.85	1.42
Obedience Requirement	3.47	1.33
RB4- Follow the mountain guide	3.80	1.40
RB11- Inform my mountain guide if I have any health problems	3.13	1.97

Note: RB = Responsible Behaviour. Scale: 1- Never, 3- Sometimes, 5- Always and 0- Not Applicable.

4.3.5 Norms

Norms was represented by two dimensions: "media norm" and "subjective norm". The means and standard deviations of this construct are presented in Table 4.8. Mountaineers had an overall mean score of 2.75 ± 0.87. They had a higher score for subjective norm (3.00 ± 0.95) than media norm (2.49 ± 1.17).

For the media norm dimension, the mean scores for the three items ranged from 2.14 to 2.80 (Table 4.8). The finding revealed that climbers have limited influence from 'information, from destination specific websites (e.g. www.sabahtourism.com, www.mountkinabalu.my, etc.)' (2.80 ± 1.40), 'information from mountain climbing websites (e.g. www.mountaintrip.com, www.summitclimb.com, etc.)' (2.53 ± 1.39) and 'information from mountain climbing magazines (e.g. Climbing, Alpinist, Climb, etc.)' (2.14 ± 1.30).

For the subjective norm dimension, the mean scores for the four items ranged from 2.63 to 3.33 (Table 4.6). The results indicated that climbers are moderately influenced by 'climbing partners/ group members' (3.33 ± 1.34), 'mountain guides' (3.26 ± 1.33), 'other climbers' (3.12 ± 1.16) and 'family members' (2.63 ± 1.36). Therefore, climbing partners or group members had the greatest influence on climber behaviour while mountain climbing.

Table 4.8

Descriptive Analysis of Norms (N = 616)

Construct: Norms	Mean = 2.75	SD = 0.87
Media Norm	2.49	1.17
SN6- Information from mountain climbing websites (e.g. www.mountaintrip.com, www.summitclimb.com, etc.)	2.53	1.39
SN7- Information from mountain climbing magazines (e.g. Climbing, Alpinist, Climb, etc.)	2.14	1.30
SN8- Information from destination specific websites (e.g. www.sabahtourism.com, www.mountkinabalu.my, etc.)	2.80	1.40
Subjective Norm	3.00	0.95
SN1- Climbing partners/ group members	3.33	1.34
SN2- Other climbers	3.12	1.16
SN3- Family members	2.63	1.36
SN4- Mountain guides	3.26	1.33

Note: SN = Media/Subjective Norms.
Scale: 1- Not at all, 3- To a moderate extent, 5- To a great extent.

4.3.6 Perceived Behavioural Control

Respondents indicated how strongly they agreed or disagreed with the ease or difficulty in performing responsible behaviour related to safety/health during the climb. As shown in Table 4.9, the mean scores for the following items are low: 'It is just too difficult for someone like me to do much about my own safety/health during the climb' (2.21 ± 2.14) and 'There is no point in doing what I can for safety/health during the climb, unless others do the same' (1.21 ± 1.20). This showed that climbers disagree with these two items. Therefore, it was

easy for them to do more about their own safety and health when climbing and they believed that they should do what they can do for their own safety and health during the climb.

Table 4.9

Descriptive Analysis of Perceived Behavioural Control (N = 616)

Construct: Perceived Behavioural Control	Mean = 2.17	SD = 1.08
PBC1- It is just too difficult for someone like me to do much about my own safety/health during the climb	2.21	2.14
PBC2- There is no point in doing what I can for safety/health during the climb, unless others do the same	1.21	1.20

Note: PBC = Perceived Behavioural Control.
Scale: 1- Strongly disagree, 3- Neutral, 5- Strongly agree.

4.3.7 Satisfaction

To examine climbers satisfaction, respondents answered how strongly they agreed or disagreed with statements about their satisfaction with their Mount Kinabalu experience. Satisfaction was represented by four items as shown in Table 4.10. The mean scores for the four items ranged from 3.86 to 4.35. The results indicated that climbers possess the highest mean score for 'I am satisfied with my decision to climb Mount Kinabalu' (4.35 ± 0.83) followed by 'I truly enjoyed this vacation in Mount Kinabalu' (4.32 ± 0.83), 'I am sure it is right to spend my holiday climbing Mount Kinabalu' (4.06 ± 0.99) and 'This climbing trip is exactly what I need' (3.86 ± 0.99). The results demonstrated that climbers are satisfied with their decision to climb Mount Kinabalu and enjoyed their vacation at the mountain.

Table 4.10

Descriptive Analysis of Satisfaction (N = 616)

Construct: Satisfaction	Mean = 4.15	SD = 0.76
SAT1- This climbing trip is exactly what I need	3.86	0.99
SAT2- I am satisfied with my decision to climb Mount Kinabalu	4.35	0.83
SAT3- I truly enjoyed this vacation in Mount Kinabalu	4.32	0.83
SAT5- I am sure it is right to spend my holiday climbing Mount Kinabalu	4.06	0.99

Note: SAT= Satisfaction.
Scale: 1- Strongly disagree, 3- Neutral, 5- Strongly agree.

4.3.8 Loyalty Intention

Loyalty intention of climbers was represented by three items where respondents were asked about their intention to revisit Mount Kinabalu, recommend it to others and encourage friends and others to climb. The means and standard deviations of these items are presented in Table 4.11. The results for the three items ranged from 4.25 to 4.46. These results indicated that climbers possess the highest mean score for **'**Share my experiences of climbing Mount Kinabalu with others' (4.46 ± 0.82) followed by 'Recommend Mount Kinabalu climb to others' (4.33 ± 0.86) and 'Encourage friends and others to climb Mount Kinabalu' (4.25 ± 0.91). The findings revealed that climbers are very likely to tell friends and others about their experiences, recommend this trip to others and encourage them to climb Mount Kinabalu.

Table 4.11

Descriptive Analysis of Loyalty Intention (N = 616)

Construct: Loyalty Intention	Mean = 4.35	SD = 0.76
LOY1- Share my experiences of climbing Mount Kinabalu with others	4.46	0.82
LOY2- Recommend Mount Kinabalu climb to others	4.33	0.86
LOY3- Encourage friends and others to climb Mount Kinabalu	4.25	0.91

Note: LOY = Loyalty.
Scale: 1- Very unlikely, 3- Neutral, 5- Very likely.

4.4 Scale Purification

In light of the satisfactory results of the EFA in Chapter 3, CFA was performed to evaluate the unidimensionality, convergent validity, discriminant validity and construct reliability of the research scale. The confirmatory measurement model should be examined and re-specified before the measurement and structural equation model are evaluated simultaneously (Gerbing & Anderson, 1988; Lu et al., 2007; Ong & Musa, 2011a; Yoon & Uysal, 2005). Therefore, each construct in the model was evaluated separately before testing the measurement model.

Fit statistics should be applied and generated to examine the satisfactoriness and adequacy of the factor models which are adapted from CFA (Byrne, 2013). In the current study, each construct was tested with multiple fit criteria such as: Chi-square statistics (x^2), degree of freedom (df), P-value, Relative Chi-square (x^2/df), Adjusted Goodness of Fit Index (AGFI), Goodness of Fit Index (GFI), Comparative Fit Index (CFI), Incremental Index of Fit (IFI) and Root Mean Square Error of Approximation (RMSEA). The CFA and model fit were examined with the Maximum Likelihood Estimation (MLE) technique, following the guidelines suggested by Joreskog & Sorbom (1982; 1984) and El-Gohary (2012). Results for all the constructs are presented below.

4.4.1 Spirituality

The original questionnaire in this construct had 20 questions with four dimensions (five questions per dimension). To test the acceptable fit with the data in this stage, the CFA confirmed 11 questions to represent four dimensions. Two items each from the personal, environmental and transcendental dimensions and three items from the communal dimension were deleted to provide a better model of fit. Thus, an 11-item model for spirituality was produced as shown in Figure 4.1. Relative Chi-square (x^2/df = 2.4) was less than the recommended maximum level of 5. Values for both the Adjusted Goodness of Fit Index (AGFI = .955) and Goodness of Fit Index (GFI = .973) were close to 1.00, which represented a good fit (Byrne, 2013). The Comparative Fit Index (CFI = .982) and Incremental Index of Fit (IFI=.982) were more than the recommended minimum level of 0.9 and Root Mean Square Error of Approximation (RMSEA = .048) was less than the recommended maximum level of 0.08. Therefore the data produced a good fit to the model (Figure 4.1).

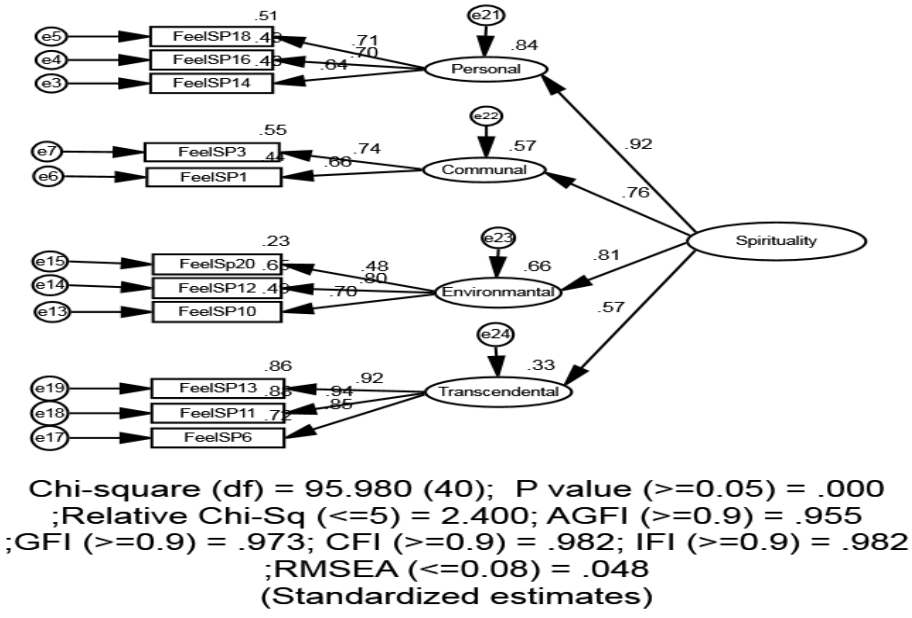


Figure 4.1. Result of Measurement Model for Spirituality

4.4.2 Personality

The initial questionnaire in personality construct had 25 items in 5 dimensions with five items in each dimension. Seven items were deleted after CFA analysis because their factor loading was less than .50. These were one item each from extraversion and conscientiousness, three items from neuroticism and two items from openness to experience. Thus, an 18-item model for personality was retained as shown in Figure 4.2. The CMIN/DF of 3.704 was below the recommended maximum of 5. The values of AGFI = .891, GFI = .918, CFI = .895 and IFI = .896 were close to 1.0 so they produced a good fit. The RMSEA of .066 also showed a good fit because the value was less than .08. (Browne et al., 1993). Therefore, as shown in Figure 4.2, the data produced a good fit to the model.

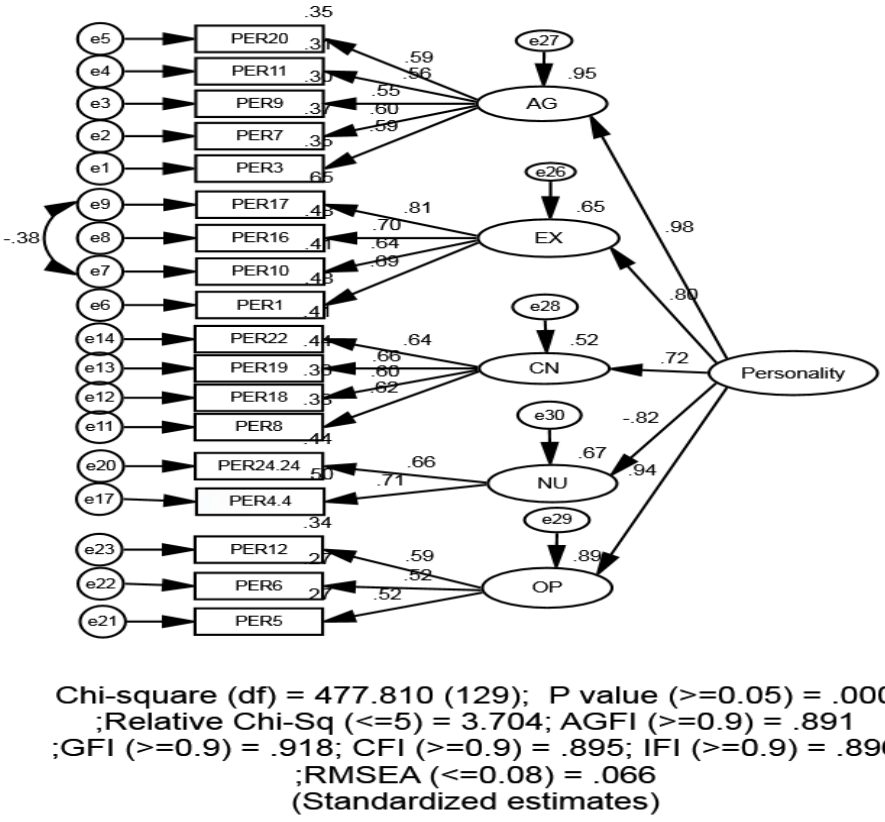
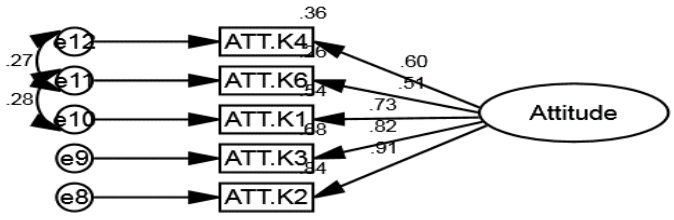


Figure 4.2. Result of Measurement Model for Personality

4.4.3 Attitude towards Behaviour

From the EFA results (discussed in Chapter 3), items of Attitude towards Behaviour were divided into three dimensions, namely knowledge (6 items), awareness (7 items) and commitment (5 items). Two factors (commitment and awareness) were discarded due to the low (0.15) coefficient alpha value which was less than the acceptable level of 0.30 (Jöreskog, 1993). Five items were retained as first order factor for attitude towards behaviour. The 5-item model for attitude towards behaviour is shown in Figure 4.3. The CMIN/DF of 0.946 is less than the recommended maximum level of 5. The values of AGFI = .991, GFI = .998, CFI = 1.000 and IFI = 1.000 are better than the recommended level of .90 and close to 1.0, and thus the produce a good fit. The RMSEA of .000 showed a good fit because the value is less than .08. Thus, the data indicated a good fit to the model (Figure 3).



Chi-square (df) = 2.838 (3); P value (>=0.05) = .417
;Relative Chi-Sq (<=5) = .946; AGFI (>=0.9) = .991
;GFI (>=0.9) = .998; CFI (>=0.9) = 1.000; IFI (>=0.9) = 1.000
;RMSEA (<=0.08) = .000
(Standardized estimates)

Figure 4.3. Result of Measurement Model for Attitude towards Behaviour

4.4.4 Responsible Mountaineering Behaviour

The EFA (discussed in Chapter 3) produced four dimensions for the Responsible mountaineering behaviour construct: "Clothing Requirement" (five items), "Food and Drink Requirement" (two items), "Equipment Requirement" (three items) and "Obedience Requirement" (two items). Following the CFA, two items from clothing requirement and one item from equipment requirement were discarded. Thus, a 9-item model for responsible mountaineering behaviour was retained as shown in Figure 4.4. The CMIN/DF is 2.301 which is less the than recommended maximum level of 5. The values of AGFI = .963, GFI = .982, CFI = .956 and IFI = .957 are close to 1.0, thus they represent a good fit. In addition, the RMSEA of .046 which is less than .05, and thus demonstrates a good fit. Therefore, as shown in Figure 4, the data indicated a good fit to the model.

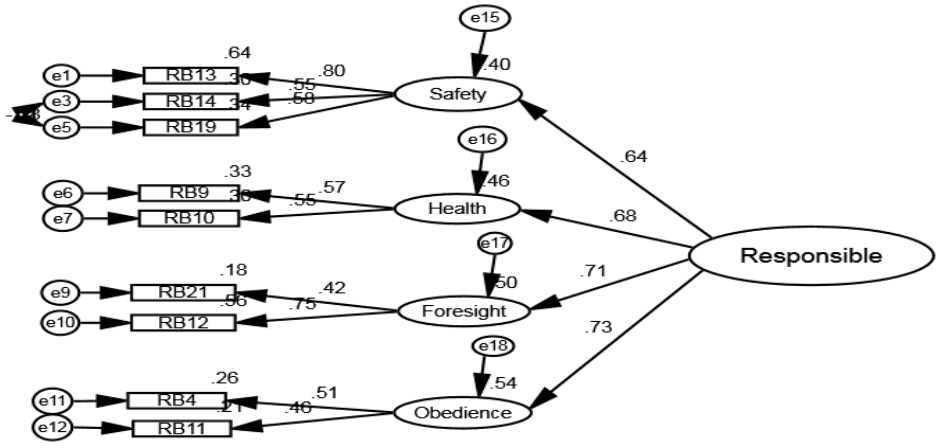


Figure 4.4. Result of Measurement Model for Responsible Mountaineering Behaviour

4.4.5 Norms

The EFA (discussed in Chapter 3) produced two dimensions for the norms construct: "subjective norm" (four items) and "media norm" (four items). Following the CFA, two items (SN5 and SN1) were discarded because their factor loading is less than .50. Thus, a 6-item model for norms was retained as shown in Figure 4.5. The CMIN/DF is 2.541 which was less than the recommended maximum level of 5. The values of AGFI = .972, GFI = .992, CFI = .991 and IFI = .991 are better than the recommended level which is close to 1.0 and more than .9, thus indicate a good fit. RMSEA = .050 also represents a good fit. Therefore, the data indicated a good fit to the model.

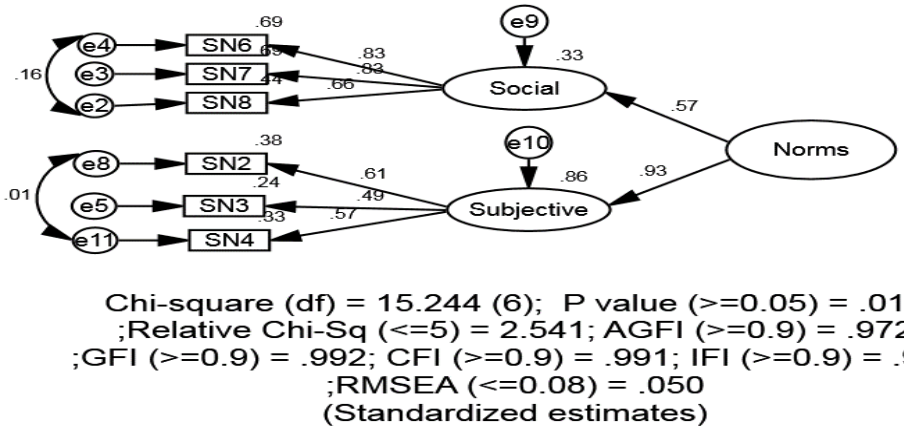
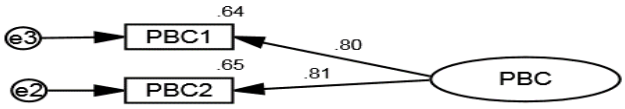


Figure 4.5. Result of Measurement Model for Norms

4.4.6 Perceived Behavioural Control

For the perceived behavioural control construct, the EFA confirmed five items representing this construct. Following the CFA, three items were discarded. Thus, a 2-item model for PBC was retained as shown in Figure 4.6. The CMIN/DF of 2.432 was less than the recommended maximum level of 5. The values of AGFI = .988, GFI = .996, CFI = .995 and IFI = .995 are close to 1.0 and RMSEA = .048 which is less than .05, and thus represents a good fit. Therefore, the data indicated a good fit to the model.



Chi-square (df) = 2.432 (1); P value (>=0.05) = .119
;Relative Chi-Sq (<=5) = 2.432; AGFI (>=0.9) = .988
;GFI (>=0.9) = .996; CFI (>=0.9) = .995; IFI (>=0.9) = .995
;RMSEA (<=0.08) = .048
(Standardized estimates)

Figure 4. 6. Result of Measurement Model for Perceived Behavioural Control

4.4.7 Satisfaction

For satisfaction, the EFA produced five items in this construct. As a result of the CFA, one item was discarded. Thus, a 4-item model for satisfaction was retained as shown in Figure 4.7. The CMIN/DF is 1.686 that is less than the recommended maximum level of 5. The values of AGFI = .987, GFI = .997, CFI = .999 and IFI = .999 are better than the recommended level of .90 and close to 1.0, and thus, they represent a good fit. RMSEA = .033 represents good fit because the value is less than .05. Thus, the data indicated a good fit to the model.

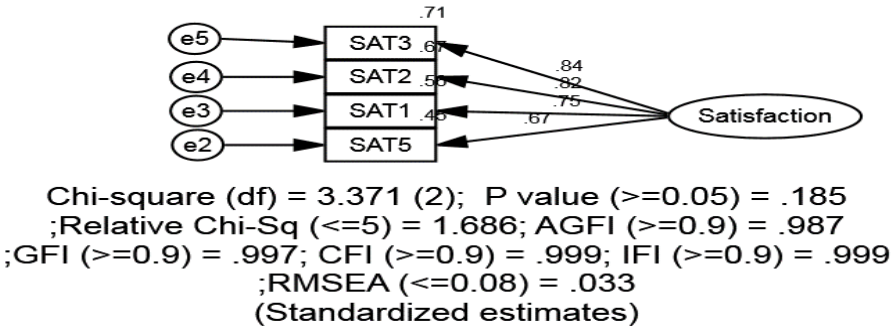
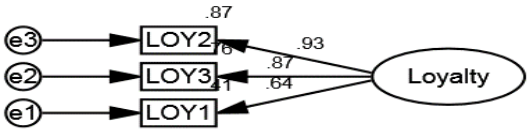


Figure 4.7. Result of Measurement Model for Satisfaction

4.4.8 Loyalty Intention

For the loyalty intention construct, the EFA produced three items in this construct. As a result of the CFA, a 3-item model for loyalty intention was presented as shown in Figure 4.8. The CMIN/DF is 1.506 which is less than the recommended maximum level of 5. The values of AGFI = .990, GFI = .998, CFI = .999 and IFI = .999 are close to 1.0 so they represent a good fit. The RMSEA = .029 is good enough fit (Browne et al., 1993). Therefore, the data indicated a good fit to the model.



Chi-square (df) = 1.506 (1); P value (>=0.05) = .220
;Relative Chi-Sq (<=5) = 1.506; AGFI (>=0.9) = .990
;GFI (>=0.9) = .998; CFI (>=0.9) = .999; IFI (>=0.9) = .999
;RMSEA (<=0.08) = .029
(Standardized estimates)

Figure 4.8. Result of Measurement Model for Loyalty Intention

Table 4.12 shows a summary of fit indices for all constructs. The goodness of fit of the CFA for each construct is highly acceptable according to the recommended levels of fitness.

Table 4.12

Fit Indices for Each Construct

Construct	x^2	df	p≤.05	x^2/df	AGFI	GFI	CFI	IFI	RMSEA
Spirituality	95.980	40	.000	2.400	0.955	0.973	0.982	0.982	0.048
Personality	477.810	129	.000	3.704	0.891	0.918	0.895	0.896	0.066
Attitude	2.838	3	0.417	0.946	0.991	0.998	1.000	1.000	0.000
Responsible	50.618	22	0.000	2.301	0.963	0.982	0.956	0.957	0.046
Norms	15.244	6	0.018	2.541	0.972	0.992	0.991	0.991	0.050
PBC	2.432	1	0.119	2.432	0.988	0.996	0.995	0.995	0.048
Satisfaction	3.371	2	0.185	1.686	0.987	0.997	0.999	0.999	0.033
Loyalty	1.506	1	0.220	1.506	0.990	0.998	0.999	0.999	0.029

Statistic	Suggested
Chi-Square Significant	≥0.05
Adjusted Goodness-of- Ft Index (AGFI)	≥0.80
Goodness-of-Fit Index (GFI)	≥0.90
Comparative Fit Index (CFI)	≥0.90
Incremental Fit Index (IFI)	≥0.80
Root Mean Square Error of Approximation (RMSEA)	≤0.08

Note: guidelines suggested by Joreskog & Sorbom (1982; 1984) and El-Gohary (2012).

4.5 Multivariate Assumption

Before proceeding with analysis in the measurement model and Structure Equation Modelling, it is necessary to check that the fulfilment of following multivariate assumptions: normality, outliers, linearity, homoscedasticity and multicollinearity.

4.5.1 Normality

Normality refers to whether data are normally distributed for a particular variable. Normality can be assessed by level of skewness and kurtosis for each variable (Arbuckle, 2008). "Whereas skewness tends to impact tests of means, kurtosis severely affects tests of variances and covariances. Given that SEM is based on the analysis of covariance structures, evidence of kurtosis is always of concern and, in particular, evidence of multivariate kurtosis, as it is known to be exceptionally detrimental in SEM analyses" (Byrne, 2010, p. 103). Standardised kurtosis index values equal to or greater than 7 indicate departure from normality (West et al,. 1995 as cited in Byrne, 2010, p. 103). Therefore, using 7 as a guide, no items are substantially kurtotic (Table 4.13).

Table 4.13

The Levels of Skewness and Kurtosis for All Variables

Variable	min	max	skewness	kurtosis
RB19	.000	5.000	-1.507	2.219
SN4	1.000	5.000	-.328	-.987
RB4	.000	5.000	-.905	-.351
RB11	.000	5.000	-.563	-1.303
RB21	.000	5.000	1.208	.135
RB12	.000	5.000	-.145	-1.431
LOY1	1.000	5.000	-1.651	2.571
PBC2	1.000	5.000	.678	-.618
PBC1	1.000	5.000	.597	-.711
ATT.K4	1.000	5.000	-.600	-.409
LOY3	1.000	5.000	-1.181	1.090
LOY2	1.000	5.000	-1.350	1.795
RB13	.000	5.000	-1.151	.866
RB14	.000	5.000	-1.889	2.709
RB10	.000	5.000	-.941	.338
RB9	.000	5.000	-1.148	1.107
ATT.K2	1.000	5.000	-.350	-.617
ATT.K3	1.000	5.000	-.547	-.285
ATT.K1	1.000	5.000	-.330	-.496
ATT.K6	1.000	5.000	-.306	-.575
FeelSP6	1.000	5.000	-.211	-1.231
FeelSP15	1.000	5.000	.058	-1.410
FeelSP13	1.000	5.000	-.248	-1.367
FeelSP11	1.000	5.000	-.106	-1.358
FeelSP2	1.000	5.000	-.205	-1.277
FeelSp20	1.000	5.000	-.391	-.591
FeelSP12	1.000	5.000	-.521	-.017
FeelSP10	1.000	5.000	-.470	-.155
FeelSP7	1.000	5.000	-.440	-.280
FeelSp4	1.000	5.000	-.573	-.021
FeelSP8	1.000	5.000	-.328	-.132
FeelSP3	1.000	5.000	-.351	-.132
FeelSP1	1.000	5.000	-.391	.216
FeelSP18	1.000	5.000	-.747	.449
FeelSP16	1.000	5.000	-.524	-.012
FeelSP14	1.000	5.000	-.883	.823
SN6	1.000	5.000	.309	-1.234
SN7	1.000	5.000	.776	-.624
SN8	1.000	5.000	.068	-1.287
SN3	1.000	5.000	.195	-1.209
SN2	1.000	5.000	-.259	-.689
SAT3	1.000	5.000	-1.216	1.427
SAT5	1.000	5.000	-.859	.210

Table 4.13, continued

Variable	min	max	skewness	kurtosis
PER24.24	1.000	5.000	.494	.445
SAT1	1.000	5.000	-.616	-.095
SAT2	1.000	5.000	-1.305	1.629
PER12	1.000	5.000	-.826	.611
PER22	1.000	5.000	-.182	-.308
PER19	1.000	5.000	-.508	.218
PER18	1.000	5.000	-.279	-.028
PER17	1.000	5.000	-.577	.219
PER16	1.000	5.000	-.119	-.347
PER10	1.000	5.000	-.080	.193
PER1	1.000	5.000	-.557	-.056
PER20	1.000	5.000	-.421	.209
PER11	1.000	5.000	-.482	.140
PER9	1.000	5.000	-.648	.265
PER7	1.000	5.000	-.149	-.458
PER3	1.000	5.000	-1.162	1.915

4.5.2 Linearity

Linearity refers to the consistent slope of change that shows in the relationship between the independent variable and dependent variable (O'Brien, 2007). Linearity of each relationship in the framework was tested with curve estimation. The results of curve estimation for all relationships in the model indicated that all relationships are sufficiently linear to be tested using covariance based on SEM (see Figure 4.9).

The scatterplot for each variable in Figure 4.9 showed that there are no serious outliers as all the cases are located between +3 and -3 as the specified residual (Hair, Black, Babin, & Anderson, 2010). In addition, the plot for all the variables show a consistent pattern. This means that the relationship between dependent and independent variables are homoscedastic (Hair et al., 2010).

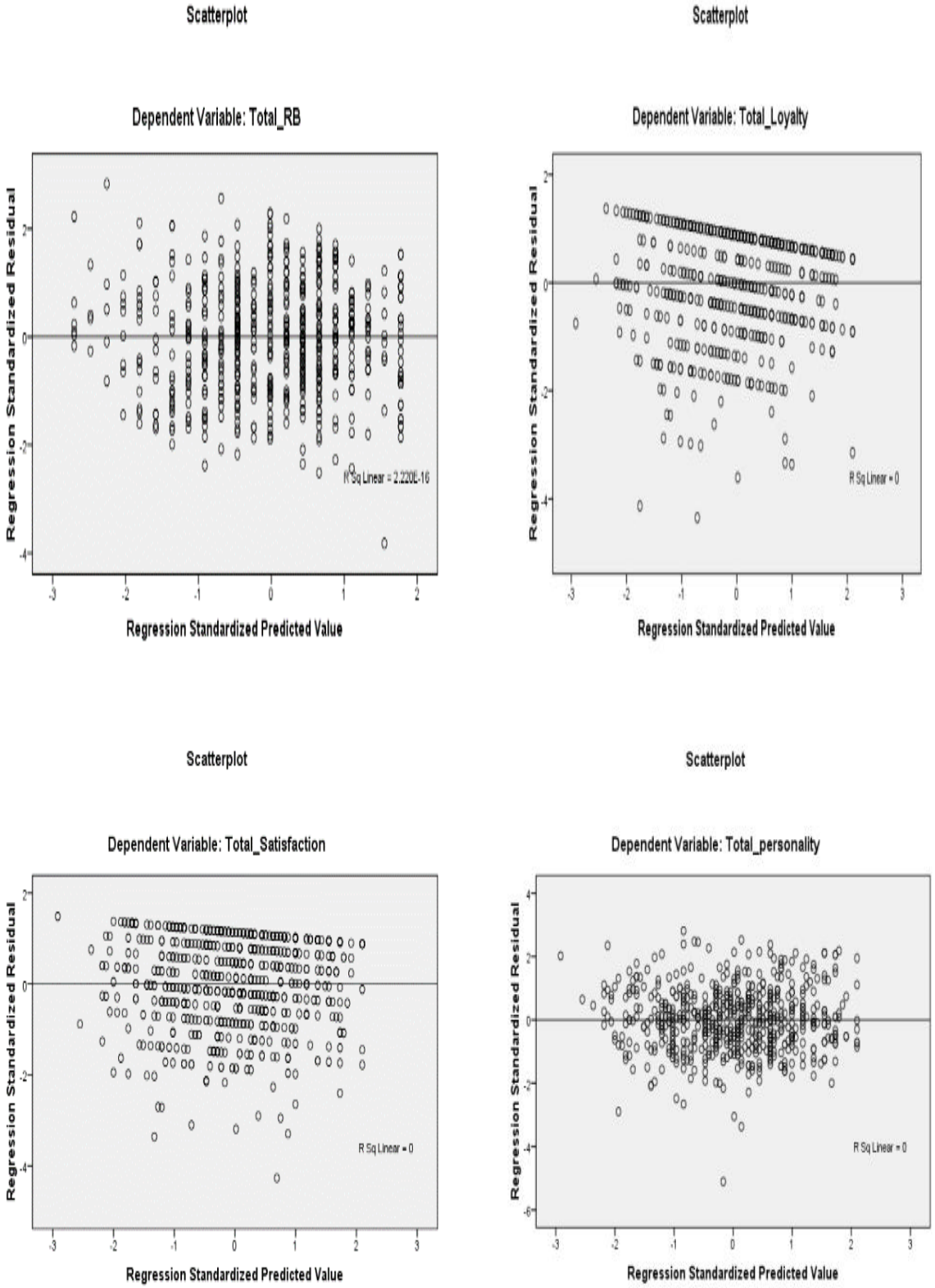
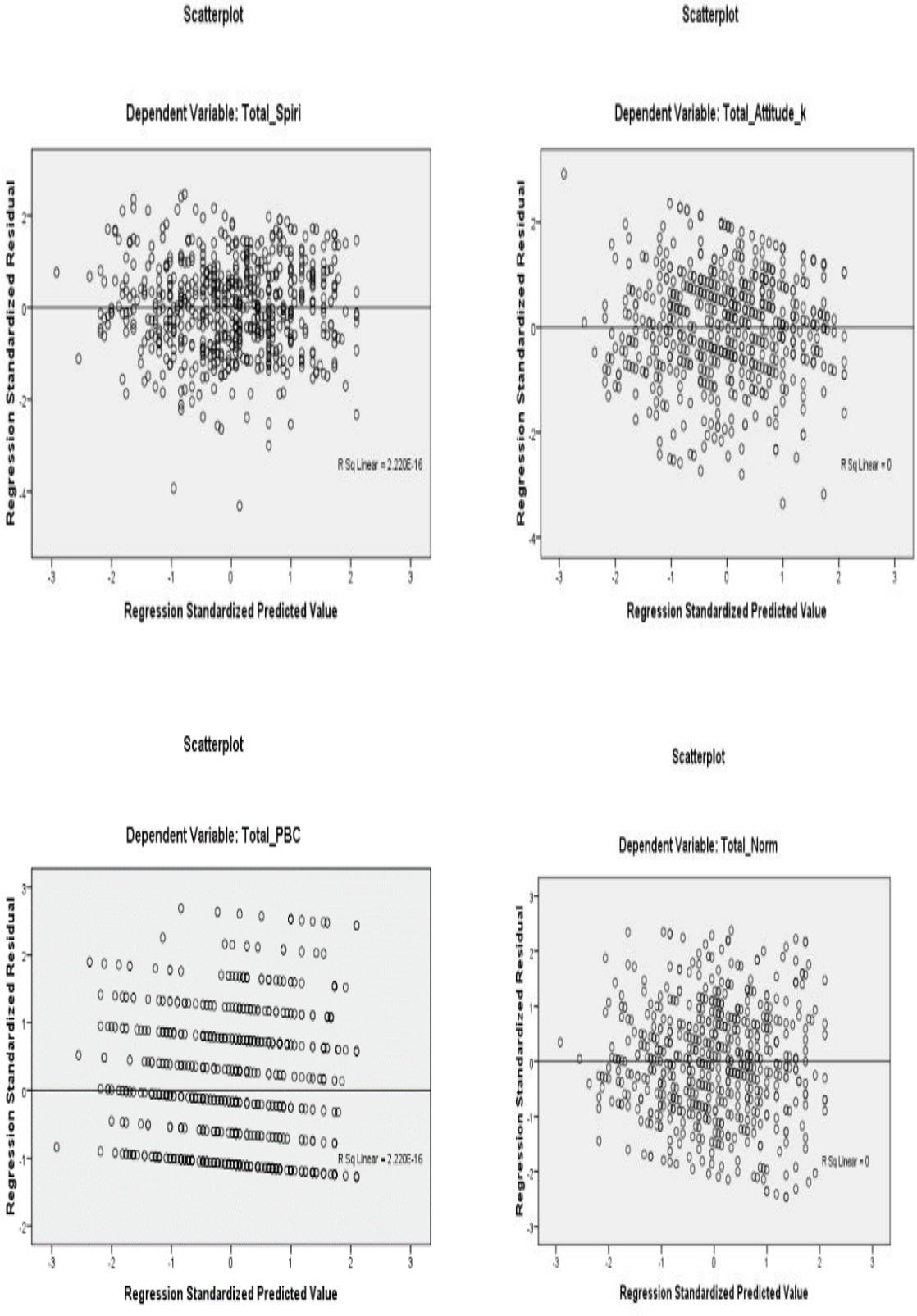


Figure 4.9: Scatterplot for variables



Cont. Figure 4.9: Scatterplot for variables

4.5.3 Multicollinearity

Independent variables which are too highly correlated with each other can create multicollinearity issues (O'Brien, 2007). Multicollinearity should be examined when more than two variables predict another variable. To check for multicollinearity, Variable Inflation Factor (VIF) and Tolerance were calculated through analysis of multiple regressions between the dependent and independent variables. A VIF of greater than 10 and a tolerance value less than 0.1 indicate multicollinearity issues (O'Brien, 2007). As shown in Tables 4.14 to 4.18, all VIF and Tolerance values are within acceptable levels. This showed that there are no multicollinearity issues among the variables.

Table 4. 14

VIF and Tolerance Values for Satisfaction

Model	Collinearity Statistics	
	Tolerance	VIF
PBC	.930	1.075
Attitude	.865	1.156
Spirituality	.863	1.158
Norms	.819	1.22

Note: Dependent variable: Satisfaction

Table 4.15

VIF and Tolerance Values for Norm

Model	Collinearity Statistics	
	Tolerance	VIF
PBC	.954	1.049
Attitude	.899	1.112
Spirituality	.889	1.125
Satisfaction	.934	1.071

Note: Dependent variable: Norm

Table 4.16

VIF and Tolerance Values for Spirituality

Model	Collinearity Statistics	
	Tolerance	VIF
PBC	.943	1.061
Attitude	.863	1.159
Satisfaction	.940	1.063
Norms	.849	1.177

Note: Dependent variable: Spirituality

Table 4.17

VIF and Tolerance Values for Attitude

Model	Collinearity Statistics	
	Tolerance	VIF
PBC	.922	1.085
Satisfaction	.959	1.042
Norms	.875	1.143
Spirituality	.879	1.138

Note: Dependent variable: Attitude

Table 4.18

VIF and Tolerance Values for PBC

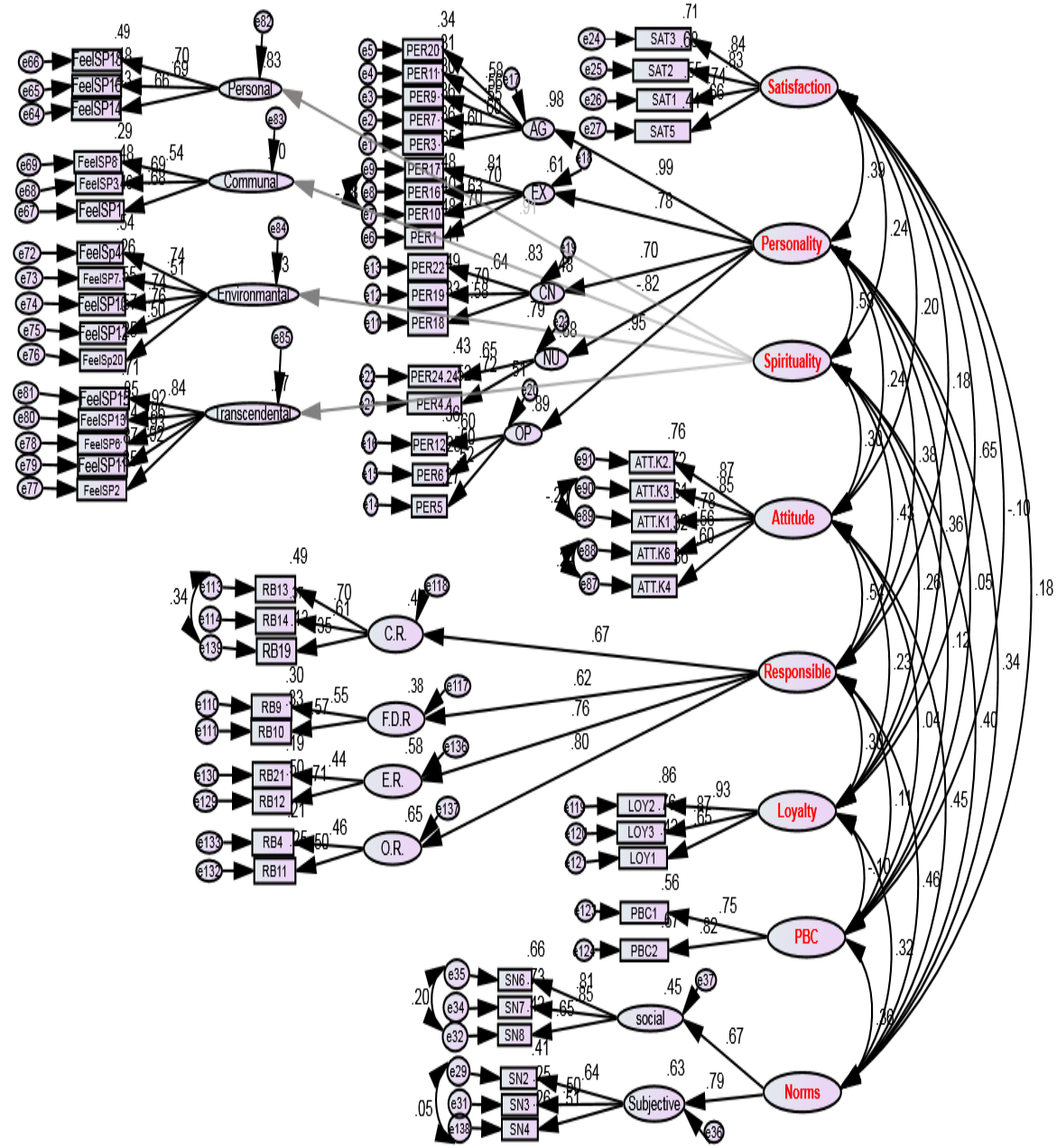
Model	Collinearity Statistics	
	Tolerance	VIF
Satisfaction	.942	1.062
Norms	.847	1.181
Spirituality	.876	1.142
Attitude	.841	1.189

Note: Dependent variable: PBC

4.6 Measurement Model

Churchill Jr (1979) believed that construct validity should always be assessed for measurement models. The criteria for establishing construct validity are unidimensionality, construct reliability and convergent and discriminant validity (O'Leary-Kelly & Vokurka, 1998). These need to be assessed through the overall measurement model. Therefore, all

variables including first order factors and second order factors were run simultaneously and results are shown in Figure 4.10.



Chi-square (df) = 3337.176 (1780); P value (>=0.05) = .000
; Relative Chi-Sq (<=5) = 1.875; AGFI (>=0.8) = .821
; GFI (>=0.9) = .897; CFI (>=0.9) = .901; IFI (>=0.9) = .901
; RMSEA (<=0.08) = .038
(Standardized estimates)

Figure 4.10: Full Measurement Model

4.6.1 Unidimensionality Assessment

O'Leary-Kelly and Vokurka (1998) believed that unidimensionality evaluates a set of empirical items associated with one and only one construct. First, items must be significantly associated with a latent variable and second, each item should be associated with just one latent variable. There are two ways to assess the unidimensionality of a measure: EFA and CFA. With regard to unidimensionality, one of the essential purposes of using EFA is to identify which items are strongly linked with a specific latent variable. The size of factor loading in the previous stage determined the strength of the link. Furthermore, CFA highlighted whether latent variables are correlated in the model. This was done by investigating the results of overall model fit and investigating the significance of each of the correlations (O'Leary-Kelly & Vokurka, 1998).

To investigate the results of overall model fit, Fornel and Larcker (1981) argued that "the chi square statistic compares the goodness of fit between the covariance matrix for the observed data and covariance matrix derived from a theoretically specified structure (model)" (p. 40). A small chi square (x^2) value with an insignificant x^2 represented a better fit model (Hu & Bentler, 1998). The model in the current study obtained an x^2 value of 3337.176 with 1,780 degrees of freedom and significant p value ($p \leq .05$) which was considered an unfit model. However, chi square tests have limitations and are not always a good enough guide to model fit (Fornell & Larcker, 1981; Hu & Bentler, 1998). One of the limitations of the chi square test is its power. It does not always reject the null hypothesis when it is false. The second limitation is the effect of sample size on the statistic. A small sample size may not be chi square distributed and a large sample size creates a large chi square (Marsh & Hocevar, 1985). Moreover, model size with more variables will create a large chi square. Therefore, it is advisable to assess model fit using other goodness of fit indexes which are less sensitive

to sample size (Hu & Bentler, 1998). Three overall model fit measures were applied in the current study: Absolute Fit Measures (AFM), Incremental Fit Measures (IFM) and Parsimonious Fit Measures (PFM). The obtained results $x^2(1780) = 3337.176$, $p = 0.000$, Goodness-of-Fit Index (GFI) = 0.897, Root Mean Square Residual (RMSR) = 0.079, Root Mean Square Error of Approximation (RMSEA) = 0.038, Adjusted Goodness-of-Fit Index (AGFI) = 0.821, Comparative Fit Index (CFI) = 0.901, Tucker-Lewis Index (TLI) = 0.895, Parsimony Goodness-of-Fit Index (PGFI) = 0.763, and Parsimonious Normed Fit Index (PNFI) = 0.763) confirmed that all three overall model fit measures in the proposed model have a very good fit with a sample size of 616 (Table 4.19).

Table 4.19

Fit Indices for Measurement Model

Types of Measures	Indices	Criteria
Absolute Fit Measures		
x^2	0.000	P ≥0.05
x^2/df	1.875 (3337.176/1780)	< 5.0
GFI	0.897	≥0.90
RMSEA	0.038	≤0.08
RMSR	0.079	≤0.09
Incremental Fit Measures		
AGFI	0.821	≥0.80
CFI	0.901	≥0.90
TLI	0.895	≥0.90
Parsimonious Fit Measures		
PGFI	0.763	≥0.50
PNFI	0.763	≥0.50

Note: x^2 = Chi-square; df = degrees of freedom; GFI = Goodness-of-Fit Index; RMSEA = Root Mean Square Error of Approximation; RMSR = Root Mean Square Residual; AGFI = Adjusted Goodness-of-Ft Index; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; PGFI = Parsimony Goodness-of-Fit Index; PNFI = Parsimonious Normed Fit Index.

Another way to find unidimensionality is to investigate the significance of each correlation. With respect to this, Critical Ratio (C.R.) which demonstrates the parameter

estimate divided by its standard error and a C.R. value of greater than ±1.96 is statistically significant (Byrne, 2013). The C.R. values presented in Table 4.20 show that all items are significant. Therefore, the results of goodness of fit and significance of each correlation demonstrate the unidimensionality of the items in this model.

Table 4.20

Regression Weights of Constructs

			Estimate	S.E.	C.R.	P
OP	<---	Personality	.995	.098	10.106	***
EX	<---	Personality	1.177	.102	11.492	***
CN	<---	Personality	.897	.091	9.829	***
NU	<---	Personality	-1.023	.088	-11.676	***
AG	<---	Personality	1.000			
Personal	<---	Spirituality	1.677	.173	9.675	***
Environmental	<---	Spirituality	1.479	.152	9.699	***
Transcendental	<---	Spirituality	1.899	.221	8.605	***
Communal	<---	Spirituality	1.000			
FDR	<---	Responsible	.359	.067	5.392	***
CR	<---	Responsible	.564	.088	6.421	***
ER	<---	Responsible	1.117	.164	6.797	***
OR	<---	Responsible	1.000			
SAT2	<---	Satisfaction	.979	.043	22.681	***
SAT1	<---	Satisfaction	1.060	.053	20.009	***
SAT5	<---	Satisfaction	.948	.055	17.346	***
SAT3	<---	Satisfaction	1.000			
Subjective	<---	Norms	.790	.106	7.441	***
Media	<---	Norms	1.000			
LOY3	<---	Loyalty	.984	.036	27.660	***
LOY2	<---	Loyalty	1.000			
LOY1	<---	Loyalty	.663	.037	18.136	***
ATT.K2	<---	Attitude	1.000			
ATT.K3	<---	Attitude	.928	.041	22.888	***
ATT.K1	<---	Attitude	.854	.042	20.376	***
ATT.K6	<---	Attitude	.621	.042	14.772	***
ATT.K4	<---	Attitude	.711	.044	16.058	***
PBC1	<---	PBC	1.000			
PBC2	<---	PBC	1.088	.152	7.161	***

4.6.2 Construct Reliability

Construct reliability means that "a set of latent indicators of constructs are consistent in their measurement" (Lu et al., 2007, p. 862). Koufteros (1999) highlighted that "the variance extracted value is a complementary measure for the construct reliability value" (p. 484). In the current study, construct reliability was examined by Composite Reliability (CR) and Average Variance Extracted (AVE).

Table 4.21 showed that the Composite Reliability for all constructs is higher than the recommended value of .07 (Byrne, 2013), thus representing good CR value. The AVE values for the constructs in the current study ranged from .514 to .679 (Table 4.21) which is greater than the recommended guideline of .50 (Koufteros, 1999). This indicated that at least 50% of the variance in the observed variable is accounted for by the construct (Lu et al., 2007).

4.6.3 Construct Validity

O'Leary-Kelly and Vokurka (1998) believed that CFA based methodologies enabled construct validity to be evaluated in the most comprehensive method and that CFA is the only method that can evaluate construct validity (p. 403). The current study evaluated two aspects of construct validity which are convergent validity and discriminant validity.

4.6.4 Convergent Validity

Convergent validity refers to the degree to which indicators for the measurement converge to the same conceptual construct (Agarwal & Prasad, 1998). To evaluate the convergent validity in the current study, AVE was calculated for the full measurement model. Fornell and Larcker (1981) believed that AVE is sensitive to deficiency of convergent validity and is able to evaluate discriminant validity as well. If the AVE value is greater than .50 (Fornell

& Larcker, 1981) and the CR is greater than AVE in all constructs, the convergent validity is adequate for the construct.

Table 4.21

CR and AVE for Each Construct

Construct and indicators	Std. Reg. Weight	Composite reliability ≥ 0.07	Average Variance Extract (AVE)≥0.5
Personality		0.832	0.514
OP	0.946		
EX	0.782		
CN	0.696		
NU	-0.824		
AG	0.988		
Spirituality		0.855	0.604
Personal	0.911		
Environmental	0.792		
Transcendental	0.515		
Communal	0.834		
Satisfaction		0.854	0.596
SAT 2	0.825		
SAT 1	0.744		
SAT 5	0.665		
SAT 3	0.842		
PBC		0.760	0.614
PBC 1	0.745		
PBC 2	0.820		
Attitude Towards B.		0.858	0.555
ATT.K 2	0.874		
ATT.K 3	0.848		
ATT.K 1	0.781		
ATT.K 6	0.565		
ATT.K 4	0.603		
Norms		0.701	0.540
Subjective	0.791		
Media	0.674		
Responsible B.		0.807	0.514
FDR	0.616		
CR	0.671		
ER	0.762		
OR	0.804		
Loyalty Intention		0.861	0.679
LOY 1	0.646		
LOY 2	0.928		
LOY 3	0.871		

Table 4.21 shows the AVE and CR values for constructs. The AVE value for the constructs ranged from .514 to .679 which is greater than the recommended value of .50. The CR is greater than AVE in all constructs. Therefore, the result proposed is acceptable convergent validity for the constructs.

4.6.5 Discriminant Validity

According to Churchill (1979), "discriminant validity is the extent to which the measure is indeed novel and not simply a reflection of some other variable" (p. 70). It is the extent to which a construct is distinctly different from other constructs. Discriminant validity was examined using AVE for each construct against shared variance (squared correlations) of other constructs in the model. If the AVE is greater than the squared correlation among the constructs, a construct has adequate discriminant validity (Fornell & Larcker, 1981). As shown in Table 4.22, AVE for all constructs is greater than each squared correlation between two constructs. Therefore, discriminant validity is adequate for all constructs.

Table 4.22

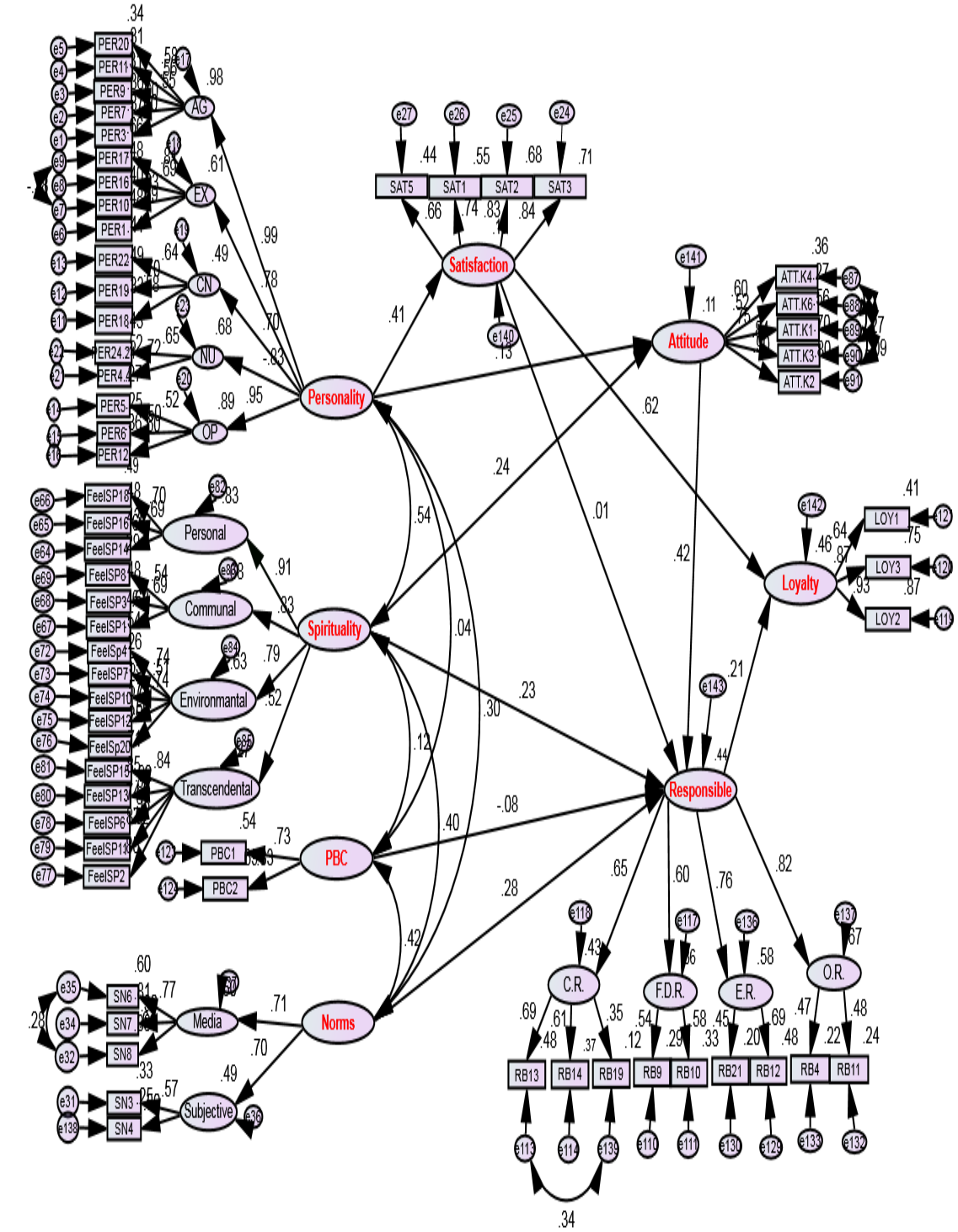
Discriminant Validity

	CR	AVE	Responsible	Personality	Satisfaction	Norms	Spirituality	Attitude	Loyalty	PBC
Responsible	0.807	0.514	**0.514**							
Personality	0.832	0.729	0.379	**0.729**						
Satisfaction	0.854	0.596	0.176	0.393	**0.596**					
Norms	0.701	0.540	0.456	0.344	0.175	**0.540**				
Spirituality	0.855	0.604	0.432	0.535	0.239	0.400	**0.604**			
Attitude	0.858	0.555	0.544	0.241	0.202	0.446	0.299	**0.555**		
Loyalty	0.861	0.679	0.302	0.364	0.651	0.319	0.265	0.229	**0.679**	
PBC	0.760	0.614	0.106	0.050	-0.104	0.364	0.122	0.037	-0.102	**0.614**

4.7 Structural Model

Arbuckle (2008) defined structural model as "The portion of the model that specifies how the latent variables are related to each other is sometimes called the structural model" (p. 86). After the measurement model described the relationships between latent variables with their observed variables, a structural model will demonstrate the links among the latent variables themselves (Byrne, 2010) (Figure 4.11).

The purpose of using SEM is to evaluate the direct and indirect effects of each hypothesis on the theoretical model to test if the theoretical hypothesised model was consistent with the collected data. An initial theoretical model was evaluated with six gamma paths and four beta path consisting of four exogenous constructs (personality, spirituality, PBC and norms) and four endogenous constructs (satisfaction, attitude towards behaviour, responsible mountaineering behaviour and loyalty intention).



Chi-square (df) = 3238.523 (1732); P value (>=0.05) = .000
; Relative Chi-Sq (<=5) = 1.870; AGFI (>=0.8) = .823
; GFI (>=0.9) = .898; CFI (>=0.9) = .903; IFI (>=0.9) = .903
; RMSEA (<=0.08) = .038
(Standardized estimates)

Figure 4.11. The Proposed Structural Model

Table 4.23

Fit Indices for Structural Model

Types of Measures	Indices	Criteria
Absolute Fit Measures		
x^2	0.000	P ≥0.05
x^2/df	1.870 (3238.523/1732)	< 5.0
GFI	0.898	≥0.90
RMSEA	0.038	≤0.08
RMSR	0.082	≤0.09
Incremental Fit Measures		
AGFI	0.823	≥0.80
CFI	0.903	≥0.90
TLI	0.897	≥0.90
Parsimonious Fit Measures		
PGFI	0.767	≥0.50
PNFI	0.769	≥0.50

Note: x^2 = Chi-square; df =degrees of freedom; GFI = Goodness-of-Fit Index; RMSEA = Root Mean Square Error of Approximation; RMSR = Root Mean Square Residual; AGFI = Adjusted Goodness-of-Ft Index; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; PGFI = Parsimony Goodness-of-Fit Index; PNFI = Parsimonious Normed Fit Index.

A review of previous research revealed that the chi-square test has some limitations and is not always a good enough guide to model fit and it is heavily influenced by the sample size (Fornell & Larcker, 1981; Hu & Bentler, 1998). Therefore, it is more appropriate to assess model fit using other goodness of fit indexes which are less sensitive to sample size (Hu & Bentler, 1998). Table 4.23 shows the chi-square value (x^2 (1732) = 3238.523, p = 0.000) was significant, but other goodness-of-fit indices demonstrated an acceptable level (GFI = 0.898, RMSR = 0.082, RMSEA = 0.038, AGFI = 0.823, CFI= 0.903, TLI = 0.897, PGFI = 0.767, and PNFI = 0.769). Thus, the proposed path model provided a good fit of the data and is recognised as the best model to examine the hypothetical model in the current study (Hull, Lehn, & Tedlie, 1991).

4.8 Hypothesis Testing

Based on results of SEM (Table 4.24), the following hypotheses were examined:

H1: Attitude towards behaviour has a significant influence on responsible mountaineering behaviour

As shown in Table 4.18, the link between attitude towards behaviour and responsible mountaineering behaviour generated a standardised coefficient value of 0.423 with S.E. = 0.055 and t-Value = 5.899 which was significant at $p < .001$. This result indicated that attitude towards behaviour has a significant relationship with responsible mountaineering behaviour. Therefore, the result supported H1.

H2: Spirituality has a significant influence on responsible mountaineering behaviour

The path between spirituality and responsible mountaineering behaviour demonstrated a standardised coefficient value of 0.233 with S.E. = 0.161 and t-Value = 3.063 which was significant at $p < .01$. This result indicated that spirituality has a significant relationship with responsible mountaineering behaviour. Therefore, the result supported H2.

H3: Norms have a significant influence on responsible mountaineering behaviour

As shown in Table 4.18, the link between norms and responsible mountaineering behaviour indicated a standardised coefficient value of 0.281 with S.E. = 0.100 and t-Value = 2.651 which was significant at $p < .01$. This result indicated that norms (media norm and subjective norm) have a significant relationship with responsible mountaineering behaviour. Therefore, the result supported H3.

H4: PBC has a significant influence on responsible mountaineering behaviour

The standardised coefficient value for the path from PBC to responsible mountaineering behaviour was -0.075 with S.E. = 0.060 and t-Value = -1.099 which was not significant. The result revealed that there was no significant relationship between PBC and responsible mountaineering behaviour. Thus, H4 was not supported.

H5: Satisfaction has a significant influence on loyalty intention

As shown in Table 4.18, the path between satisfaction and loyalty intention represented a standardised coefficient value of 0.619 with S.E. = 0.048 and t-Value = 14.495 which was significant at $p < .001$. This result indicated that satisfaction has a significant relationship with loyalty intention. Therefore, the result supported H5.

H6: Responsible mountaineering behaviour has a significant influence on loyalty intention

The link between responsible mountaineering behaviour and loyalty intention generated a standardised coefficient value of 0.210 with S.E. = 0.050 and t-Value = 4.262 which was significant at $p < .001$. This result indicated that responsible mountaineering behaviour has a significant relationship with loyalty intention. Therefore, the result supported H6.

H7: Personality has a significant influence on satisfaction

The path between personality and satisfaction demonstrated a standardised coefficient value of 0.406 with S.E. = 0.078 and t-Value = 8.016 which was significant at $p < .001$. This result indicated that personality has a significant relationship with satisfaction. Therefore, the result supported H7.

H8: Personality has a significant influence on attitude towards behaviour

As shown in Table 4.24, the link between personality and attitude towards behaviour demonstrated a standardised coefficient value of 0.125 with S.E. = 0.129 and t-Value = 2.199 which was significant at $p < .05$. This result indicated that personality has a significant relationship with attitude towards behaviour. Therefore, the result supported H8.

Table 4.24

Standardised Path Coefficients of the Structural Model (N = 616)

Hypotheses	Standardised Coefficient	S.E.	t-Value	P
H1: ATT → RMB	0.423	0.055	5.899	***
H2: SPI → RMB	0.233	0.161	3.063	**
H3: NOR→ RMB	0.281	0.100	2.651	**
H4: PBC → RMB	-0.075	0.060	-1.099	0.272
H5: SAT → LOY	0.619	0.048	14.495	***
H6: RMB→ LOY	0.210	0.050	4.262	***
H7: PER→ SAT	0.406	0.078	8.016	***
H8: PER→ ATT	0.125	0.129	2.199	*

Note: H = Hypotheses; SPI = Spirituality; RMB = Responsible Mountaineering Behaviour; ATT = Attitude towards Behaviour; NOR = Norms; PBC = Perceived Behavioural Control; SAT = Satisfaction; LOY = Loyalty Intention; PER = Personality; SE = Standard Error.
***p < .001, **p < .01, *p < .05 and significant level at t-Value > 1.96.

H9: The influence of spirituality on responsible mountaineering behaviour is mediated by attitude towards behaviour

The direct effect of spirituality on responsible mountaineering behaviour was significant at 0.304 (see Table 4.25). In addition, the indirect effect of spirituality → attitude → responsible mountaineering behaviour was also recognised (0.24 × 0.42) = 0.100.

The mediating influence of attitude towards behaviour on the relationship between spirituality and responsible mountaineering behaviour was evaluated using direct effect (without mediator) and indirect effect (with mediator). To examine direct effect, attitude was deleted temporarily from the SEM model to test the effect of spirituality on responsible mountaineering behaviour without any mediators. The results demonstrate a strong influence of spirituality on responsible behaviour without mediator ($p < .001$). To investigate the indirect effect, attitude was returned as mediator and again tested for the effect of spirituality on responsible mountaineering behaviour. Results from AMOS by Standardised Indirect Effects – Two Tailed Significant in Bootstrap indicated that this relationship was significant with $p = 0.012$. The results also revealed that indirect effect is meaningful because direct effect decreased after adding the mediator (Zhao, Lynch, & Chen, 2010). The bootstrapped standardized indirect effect is significant and meaningful, therefore attitude mediates the relationship between spirituality and responsible mountaineering behaviour.

In addition, these results demonstrated that direct and indirect effect are significant. Thus attitude partially mediates the relationship between spirituality and responsible mountaineering behaviour, thus supporting H9.

Table 4.25

Mediating Effects

Hypothesis	Direct effect (without mediator)	Indirect effect	Indirect
H9: SPI → ATT → RMB	0.304 (0.001)***	0.1008 (0.012)*	Partially Mediated
H10: SAT → RMB → LOY	0.656 (0.001)***	0.002 (NS)	NS, No mediation

Note: H = Hypotheses; SPI = Spirituality; RMB = Responsible Mountaineering Behaviour; ATT = Attitude towards Behaviour; SAT = Satisfaction; LOY = Loyalty Intention; ***p < .001, *p < .05; NS = Not Significant.

H10: The influence of satisfaction on loyalty intention is mediated by responsible mountaineering behaviour

The direct effect of satisfaction on loyalty intention was significant at 0.656 (see Table 4.25). In addition, the indirect effect of satisfaction → responsible → loyalty intention was recognised (0.01 × 0.21) = 0.002. The tests of direct effect (without mediator) and indirect effect (with mediator) have been utilised to evaluate the mediating role of responsible mountaineering behaviour on the relationship between satisfaction and loyalty intention. To investigate direct effect, responsible behaviour and its dimensions were deleted temporarily from SEM model to test the effect of satisfaction on loyalty intention without any mediators. The results demonstrated a strong influence of satisfaction on loyalty intention without mediator ($p < .001$). To examine the indirect effect, responsible behaviour and its dimensions were returned as mediator and again tested the effect of satisfaction on loyalty intention. Results from AMOS by Standardised Indirect Effects – Two Tailed Significant in Bootstrap indicated that this relationship was not significant. Therefore, responsible behaviour does not mediate the relationship between satisfaction and loyalty intention, thus H10 is not supported.

4.9 Summary

This chapter describes the demographic information of the respondents and results of the study based on the study's constructs and the relationships among them. Based on results of the EFA in Chapter 3, CFA was employed to evaluate the unidimensionality, convergent validity, discriminant validity and construct reliability of the research scale. The proposed path model provided a good fit of the data and is recognised as the best model to examine the hypothesised model in the current study. Hypotheses were tested, of which eight are supported. The next chapter discusses the findings of the current study together with related literature review, before proposing the study's contributions, and making the final concluding remarks.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 Introduction

This chapter discusses the study findings based on research objectives and hypotheses stated in Chapter 1. It elaborates on the implications of main research findings, the study limitations, and suggestions for future research, before making the final concluding remarks.

5.2 Discussion

The increasing number of climbers and those who are injured and die during climbing warrant a need for examination of responsible mountaineering behaviour in mountaineering tourism. The current study explores the influence of personality, spirituality, satisfaction, attitude towards behaviour, norms and PBC on responsible mountaineering behaviour and loyalty intention. The following section discusses the findings according to each objective.

5.2.1 Objective 1: To examine the influence of attitudes, spirituality, norms and PBC on responsible behaviour in the mountain

The current study applied the TPB (Ajzen, 1985) to predict the structural relationship among the constructs within the proposed research framework. The TPB predicts the influence of attitude, subjective norms and PBC on behaviour intention, and the intention subsequently influences the actual behaviour (Ajzen, 1985, 1991; Ajzen & Driver, 1992). Researchers have found the direct influence of attitude, subjective norm and PBC on different kinds of behaviour (Ong & Musa, 2011a; Valle et al., 2005). Therefore, it was hypothesized that attitude, norms and PBC are related to responsible mountaineering behaviour.

Studies have shown that spirituality influences various types of behaviours such as coping behaviour (Arnette et al., 2007; Zwingmann et al., 2011), control behaviour (Mansager & Eckstein, 2002), positive behaviour (Gomez & Fisher, 2003) and health behaviour (Gomez & Fisher, 2005). Thus this study hypothesized a direct relationship between spirituality and responsible mountaineering behaviour.

The following hypotheses examine the influence of TPB components and spirituality on responsible mountaineering behaviour.

H1: Attitude towards behaviour has a significant influence on responsible mountaineering behaviour

The current study found a significant relationship between attitude towards behaviour and responsible mountaineering behaviour with a coefficient value of 0.423, indicating that attitude has a positive influence on responsible mountaineering behaviour ($p < 0.001$). Attitude (demonstrated by knowledge about pre-climb instructions, pre-climb requirements, mountain climbing safety practices, mental preparation before climbing and skills required for climbing) has a strong influence on responsible mountaineering behaviour. This means that if climbers' knowledge level is high, so is the responsible mountaineering behaviour.

The EFA results of attitude towards behaviour reveals that the highest mean score is awareness (mean = 4.27), followed by knowledge (mean = 3.41) and commitment (mean = 2.30). Climbers seem to have high awareness in terms of the possible weather changes, the condition of mountain walls when raining and the wind chill factor at Mount Kinabalu. This awareness translates to the high behavioural score on clothing requirements. However, knowledge of pre-climb instructions and requirements, mountain safety practices, skill required for climbing and mental preparation for the climb is slightly lower, which may

reflect the fact that many of Mount Kinabalu climbers are novices, young and inexperienced as climbers. The lowest attitude among climbers was commitment, whereby climbers show low commitment to the activity itself, in terms of joining mountain clubs, giving donations and buying magazines related to climbing. Again this may indicate the relatively inexperienced and less committed climbers who attempted to climb the mountain for the first time. The overall attitude shows the vulnerability of Mount Kinabalu climbers who probably climb the mountain because of its reputation as among the easiest adventurous activity that could be carried out in Borneo.

Further analysis with CFA shows that with the exception of knowledge, both awareness and commitment do not play roles in influencing responsible behavior among climbers on Mount Kinabalu. Other researchers (Cottrell & Graefe, 1997; Ong & Musa, 2011a; Zanna & Rempel, 1988) also discovered the importance of knowledge in influencing responsible behavior among tourists. Even though the mountain was easy to climb, the Park authority and mountain guides may enhance climbers' knowledge through briefing, video presentation and demonstration of certain crucial aspects which are necessary for climbing Mount Kinabalu.

H2: Spirituality has a significant influence on responsible mountaineering behaviour

The significant relationship between spirituality and responsible mountaineering behaviour demonstrates that spirituality has a positive influence on responsible mountaineering behaviour. The study discovers that all four dimensions of spirituality (personal, communal, environmental and transcendental) influence responsible behaviour of climbers. Climbers with high levels of personal, communal, environmental and transcendental spirituality are likely to have higher responsible mountaineering behaviour.

The finding is consistent with previous research which found that spirituality influences behaviour (Arnette et al., 2007; Gomez & Fisher, 2003; Gomez & Fisher, 2005; Mansager & Eckstein, 2002; Zwingmann et al., 2011), health behaviour (Hill & Pargament, 2003; Koenig et al., 2001), physical and mental health (Chida et al., 2009; P. C. Hill & Pargament, 2003; Seeman et al., 2003). The finding of the current study is also consistent with mountaineering literature which reported spiritual values in the mountain environment, and climbers often face spiritual and transcendental experiences in the mountains (Arave & Boren, 2012; Bernbaum & Gunnarson, 1990; Bron, 2001; Sharpley & Jepson, 2011). In the current study, climbers with high personal, communal, environmental and transcendental spirituality exhibit high responsible behaviour with respect to bringing required clothing, water and food, and obeying mountain guides during the climb.

H3: Norms have a significant influence on responsible mountaineering behaviour

The current study found a significant relationship between norms and responsible mountaineering behaviour, highlighting that norms have a positive influence on responsible mountaineering behaviour. Climbers with high levels of subjective and media norms display a higher level of responsible mountaineering behaviour.

Other research have also found that subjective norms have significant positive effects on different behaviour (Han & Kim, 2010; Han & Ryu, 2012; Lam & Hsu, 2004; Lam & Hsu, 2006). Subjective norm is a universal conceptualisation of social pressure either to be coincident with other's wishes or not (Ajzen, 1991) and that social pressure rarely has a direct effect on intention (Armitage & Conner, 2001), or even directly on behaviour itself (Ong & Musa, 2011a; Valle et al., 2005). Although some researchers found that subjective norm as a

component of the TPB could not predict intention and should be removed from the analysis (Sparks et al., 1995), results of the current study do not support this.

The current study also delineates the different degrees in importance between media norms and social norms in influencing mountaineers' behaviour. Despite its current popularity, the mean score for media norms (mean = 2.49) is much lower than subjective norms (mean = 3.00). This indicates that in safety and security circumstances, or perhaps in most other general matters, climbers rely more on the decision and actions of their friends, rather than information from the media such as magazines and the Internet (Gunther, Bolt, Borzekowski, Liebhart, & Dillard, 2006). Other research also found that subjective norms have significant positive effect on different behaviours (Han & Kim, 2010; Han & Ryu, 2012; Lam & Hsu, 2004; Lam & Hsu, 2006).

H4: PBC has a significant influence on responsible mountaineering behaviour

The relationship between PBC and responsible behaviour is not significant. PBC has a weak negative relationship with responsible mountaineering behaviour. There have been mixed results of the PBC role in previous studies on the TPB. Some have shown PBC to be a strong factor (Armitage & Conner, 2001; Lam & Hsu, 2006; Quintal et al., 2010), whereas others showed an insignificant relationship between PBC and behaviour (Wang & Ritchie, 2012). Ajzen (2005, p. 119) identified three situations where a measure of PBC could not accurately predict behaviour. These are (1) when the individual has little information about the behaviour; (2) when unfamiliar and new elements have entered into the situation; or (3) when requirements or available resources have changed. This could explain the insignificant influence of PBC on responsible behaviour in the current study. The 82.6% of climbers who

climbed Mount Kinabalu for the first time might be unfamiliar with the destination and have little information about responsible behaviour required on the mountain.

5.2.2 Objective 2: To identify the influence of satisfaction and responsible behaviour on loyalty intention

Researchers applied EDT to examine customer satisfaction, to predict the continuous usage of products (Liao et al., 2007), destination re-visit intention (Hui et al., 2007) and destination loyalty intention (Valle et al., 2006; Yoon & Uysal, 2005). Although many studies have shown a direct effect of tourist satisfaction on loyalty intention, Chen and Gursoy (2001) indicate that visitors may wish to experience a new attraction even if they were satisfied with the previous one. The current study investigates the influence of satisfaction on loyalty intention.

H5: Satisfaction has a significant influence on loyalty intention

The current study found a significant positive relationship between satisfaction and loyalty intention, indicating as climbers' satisfaction level increased, loyalty intention will increase as well.

The finding is consistent with previous research on tourist destinations (Bigne et al., 2001; Chon, 1989; Francken & Raaij, 1981; Oliver, 1980; Valle et al., 2006). In addition, the influence of satisfaction on destination loyalty or loyalty intention has been confirmed in previous studies (Valle et al., 2006; Yen & Lu, 2008; Yüksel & Yüksel, 2007). In the current study, climbers with high level of satisfaction wish to share their experiences of climbing Mount Kinabalu with others, recommend and encourage friends and others to climb the mountain.

Previous research highlighted the direct effect of various tourist behaviours on loyalty (Baker & Crompton, 2000; Han & Ryu, 2012). The current study investigates the relationship between responsible mountaineering behaviour and loyalty intention with the following hypothesis:

H6: Responsible mountaineering behaviour has a significant influence on loyalty intention

The current study found a significant relationship between responsible mountaineering behaviour and loyalty intention, highlighting that responsible mountaineering behaviour has a positive influence on loyalty intention. All the four dimensions of responsible mountaineering behaviour (clothing requirement, food and drink requirement, equipment requirement and obedience) influence loyalty intention. It can be said that mountaineers with high levels of responsible behaviour have positive loyalty intention to share the experiences, recommend or encourage friends and others to climb Mount Kinabalu. The findings of this study are consistent with previous research which demonstrates a strong relationship between behaviour and loyalty (Baker & Crompton, 2000; Han & Ryu, 2012).

5.2.3 Objective 3: To examine the influence of personality on satisfaction and attitude

H7: Personality has a significant influence on satisfaction

The study results found a significant relationship between personality and satisfaction. The four personality dimensions (agreeableness, openness to experience, extraversion and conscientiousness) influenced positively on satisfaction, with the exception of neuroticism

which displayed a negative influence on satisfaction. Therefore, climbers with high levels in agreeableness, openness to experience, extraversion and conscientiousness achieve high satisfaction.

Although significant relationships between personality traits and environmental behaviour have been observed in numerous studies (McElroy et al., 2007; Vollrath et al., 1999), limited studies have been conducted to investigate the relationship between personality and satisfaction (Siddiqui, 2012). Furthermore, there has not been any mountaineering research investigating the relationship between personality and satisfaction.

H8: Personality has a significant influence on attitude towards behaviour

The current study found a significant relationship between personality and attitude towards behaviour. It indicates that four personality dimensions (agreeableness, openness to experience, extraversion and conscientiousness) are positively related to attitude towards behaviour, with the exception of neuroticism. Therefore, climbers with high level in agreeableness, openness to experience, extraversion and conscientiousness possess a higher level of attitude towards behaviour.

Several studies recorded significant relationships between personality and general environment attitude (Hirsh, 2010; Hirsh & Dolderman, 2007; Markowitz et al., 2012; Mayer & Frantz, 2004; Swami et al., 2011) and numerous researchers suggested that personality characteristics could predict more special value orientation and attitude (McCrae & Costa Jr, 2008; Roccas et al., 2002). Ong and Musa (2012) found that there is a significant relationship between personality and attitude among scuba divers in Malaysia.

In the current study, personality traits of agreeableness, openness to experience, extraversion, conscientiousness and neuroticism influence attitude towards behaviour. These

findings are consistent with the study by Hirsh and Dolderman (2007) which found that high levels of agreeableness and openness to experience relate to great environmental concern. Surprisingly, they also found that neuroticism is related to high levels of environment concern. Moreover, Mayer and Frantz (2004) highlighted that people with higher agreeableness and openness to experience possess a greater connection with nature which predicts their pro-environment attitude. Swami (2011) also suggested that conscientiousness can positively and directly influence pro-environmental attitudes. In addition, Markowitz (2012) explored relationship between pro-environmental action and broad personality traits and showed that individuals' environmental attitudes and connection to nature fully mediate the relationship between openness to experience and pro-environment behavior.

In the current study, climbers with characteristics such as good-natured, courteous, friendly, trusting (agreeableness), original, creative, daring, independent (openness to experience), sociable, talkative, fun-loving, affectionate (extraversion), dutiful, careful, reliable, organized, hardworking (conscientiousness) are likely to have better knowledge about pre-climb instructions, pre-climb requirements, mountain climbing safety practices, mental preparation before climbing and skills required for climbing.

5.2.4 Objective 4: To test the mediating role of attitude in the relationship between spirituality and responsible behaviour

As discussed earlier, spirituality and attitude towards behaviour directly influence responsible mountaineering behaviour. Therefore, the current study formulated an objective to investigate the mediating effect of attitude towards behaviour in the relationship between spirituality and responsible mountaineering behaviour.

H9: The influence of spirituality on responsible mountaineering behaviour is mediated by attitude towards behaviour

The current study found a significant positive relationship between spirituality and attitude toward behaviour. The mediating influence of attitude towards behaviour on the relationship between spirituality and responsible mountaineering behaviour was evaluated using direct effect (without mediator) and indirect effect (with mediator). The results demonstrate a strong influence of spirituality on responsible mountaineering behaviour without mediator and with mediator. As spirituality influences responsible mountaineering behaviour directly and indirectly through attitude towards behaviour, therefore, attitude towards behaviour partially mediates the relationship between spirituality and responsible mountaineering behaviour.

5.2.5 Objective 5: To test the mediating role of responsible behaviour in the relationship between satisfaction and loyalty intention

As discussed earlier, satisfaction and responsible mountaineering behaviour have a direct influence on loyalty intention. The current study investigates the mediating effect of responsible mountaineering behaviour on the relationship between satisfaction and loyalty intention.

H10: The influence of satisfaction on loyalty intention is mediated by responsible mountaineering behaviour

The results obtained in the current study show a strong positive relationship between satisfaction and loyalty intention. The mediating influence of responsible mountaineering behaviour on the relationship between satisfaction and loyalty intention was evaluated using

direct effect (without mediator) and indirect effect (with mediator). The results demonstrate a strong influence of satisfaction on loyalty intention without mediator. However in investigating the indirect effect (with mediator), it was found that the relationship is not significant. Therefore, responsible behaviour does not mediate the relationship between satisfaction and loyalty intention.

In conclusion, the findings of the current study proposed that suggested variables of personality, spirituality, attitude towards behaviour and norms have significant positive influence on responsible mountaineering behaviour. In addition, attitude towards behaviour has a mediating role in the relationship between spirituality and responsible mountaineering behaviour.

5.3 Research Contributions

The current study results point to theoretical, managerial and marketing contributions, and these are discussed as follows:

5.3.1 Theoretical contributions

The current study used TPB and EDT to understand responsible behaviour and loyalty intention among climbers. Internal factors of personality, spirituality, attitude toward behaviour and norms (subjective norm and media norm) influence responsible mountaineering behaviour. For the final output, the researcher introduces a model which explains the antecedents of responsible behaviour among climbers, which relates to safety and security (Figure 5.1).

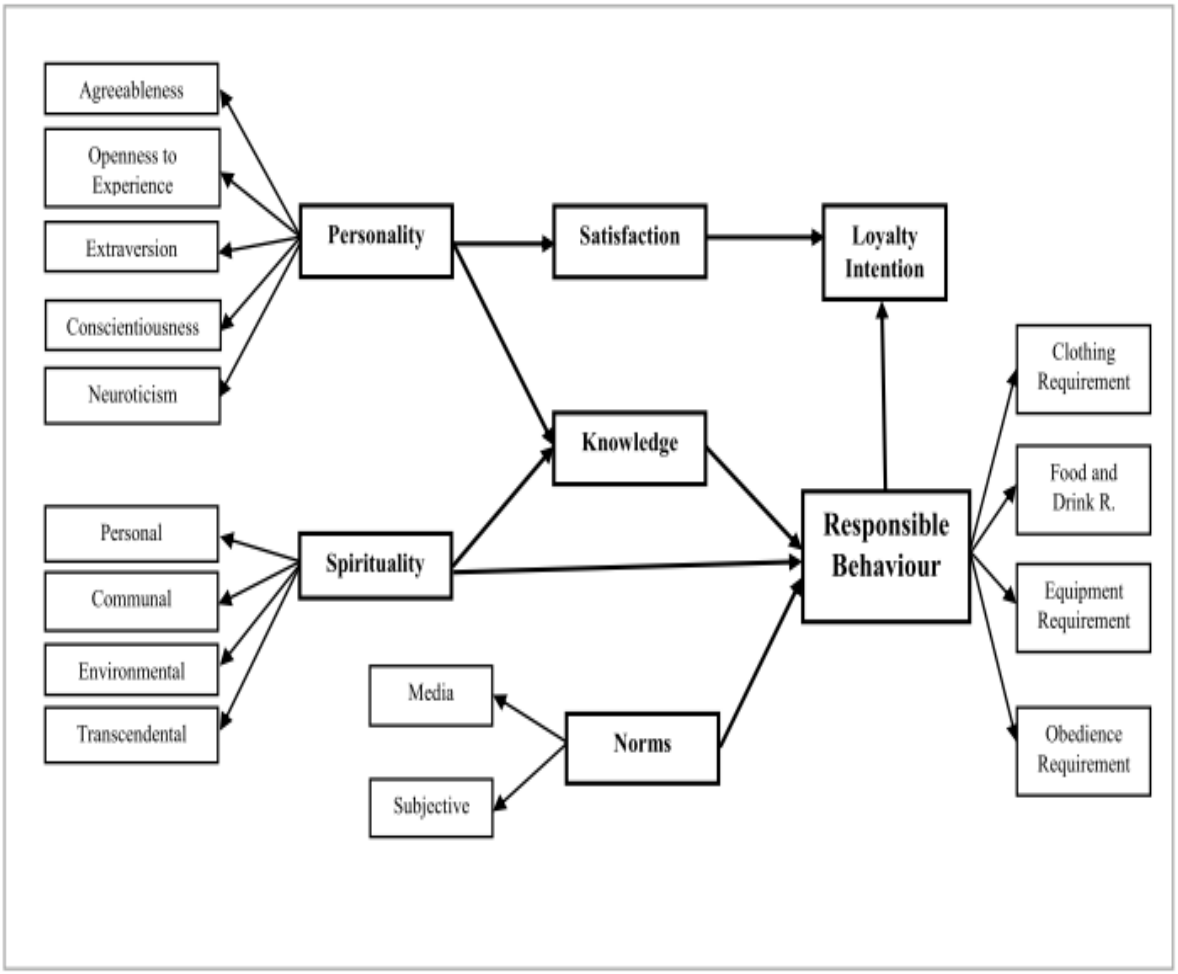


Figure 5.1. A model of factors influencing responsible behaviour on Mount Kinabalu

The current study reveals four distinct responsible behaviour dimensions (clothing, food and drink, equipment and obedience requirements) among climbers. The four dimensions - clothing requirements (.67), food and drink requirements (.62), equipment requirements (.76) and obedience requirements (.80) – which measured responsible mountaineering behaviour explained 51% of the variance. These behaviours are pertinent for the safety and security of climbers. With the large sample size achieved by this study, future research on responsible mountaineering behaviour could usefully adopt these dimensions for measurements, as the instrument has high reliability and validity.

Another theoretical contribution of this study relates to the dimensions of attitude toward behaviour among climbers. The three attitude dimensions are cognitive (knowledge), affective (awareness) and conative (commitment). These are the core dimensions of mountaineering attitude and are related to mountaineering responsible behaviour. However, the conative and affective components were not included in the full measurement model because of their low factor loadings. The current study revealed that attitude of climbers could be singularly measured by the cognitive (knowledge) dimension. The results show the importance of knowledge dimension in the attitude of climbers toward behaviour.

Other researchers also confirmed the importance of knowledge in influencing responsible behavior among tourists in various researches (Cottrell & Graefe, 1997; Ong & Musa, 2011a; Zanna & Rempel, 1988). This collectively affirmed that environmental education plays a crucial role in changing people's behaviour. In addition, Pooley and O'Connor (2000) believed that understanding the basis of environmental attitude is essential for changing environmental behaviour. Since knowledge of mountaineering practice and rules are important aspects of attitude, this factor will be beneficial in changing mountaineering attitudes and subsequently in influencing responsible mountaineering behaviour.

The study extends the role of personality in influencing the behavior both directly and indirectly through attitude. It confirms the findings of other studies (Ong & Musa, 2012; Ramanaiah, Clump, & Sharpe, 2000) of the role of different personality traits on responsible behavior.

Dimensions of norms (subjective norm and media norm) were explored as another main theoretical contribution of this study. These two dimensions - subjective norm (.79) and media norm (.67) - explained 54% of the variance to measure the norms. There is limited

research on the influence of subjective norms in the TPB on mountaineering behaviour. In the current study subjective norms refer to a mountaineering partner or group members, other climbers, family members and mountain guides who influence the mountaineering behaviour in the mountain. It also investigates the role of media norms, which consist of information from social media, mountaineering websites and magazines, and information from destination specific websites, all of which may affect mountaineering behaviour. Therefore, future measurements of norms could adapt both of these dimensions, which have high validity and reliability.

5.3.2 Managerial contribution

The study findings are useful to effectively manage the Kinabalu National Park. The high mean score for responsible mountaineering behaviour indicates that climbers paid close attention to the behaviours related to health and safety. This is consistent with other studies on responsible environmental and underwater behaviour among scuba divers (Musa et al., 2011; Ong & Musa, 2011c; Thapa, Graefe, & Meyer, 2005). With regard to responsible mountaineering behaviour, the important requirements are clothing, food and drink, obedience and equipment.

The majority of climbers plan to summit Mount Kinabalu before sunrise. Thus, having the right clothing is important, as the temperature often plunges below 0°C with pockets of ice commonly found along the summit trail. The low score of equipment requirement reflects the ease of the mountain to climb, whereby no technical mountaineering skill and equipment are required, other than the readily fixed ropes on the granite slopes and walls, and individuals' torchlights for early morning ascent in darkness. Having adequate warm clothing and comfortable climbing shoes or boots are important for climbers in Mount

Kinabalu and the park managers should provide information about such requirements. Water and high energy food are necessary during the climb, thus managers should make sure that climbers bring enough drinking water and high energy food such as chocolate and nuts.

The SEM analysis for attitude towards behaviour stressed its importance for park managers and guides to provide knowledge on pre-climb instructions and requirements, mountain safety practices, skill required for climbing and mental preparation of the climb and possible weather changing condition. A short briefing by park managers or trained mountain guides could be given to the climbers at Mount Kinabalu before the climb.

The importance of cognitive (knowledge) dimension and its influence on responsible behaviour is firmly established in this study. Therefore, the Kinabalu National Park should emphasize on promoting responsible mountaineering behaviour through the provision of knowledge and perhaps relevant skills. Mountaineering instructors must provide the necessary information related to rules and regulations, high risk places in the mountain, unique features of Mount Kinabalu, the requirements for climbing and the necessary mountaineering skills. The delivery of preliminary briefing on important mountaineering information would create an excellent opportunity for climbers to increase their knowledge and perhaps skills, which are crucial for them to succeed in climbing Mount Kinabalu. As stated earlier this could be carried out either by mountain guides or the Park authority. The knowledge would eventually guide the climbers to behave responsibly on the mountain.

Different mountaineering education programmes (including workshops, mountaineering packages and posters) could be organised. In these educational programmes, it should be noted that there are different levels of experience among climbers and it is suggested that three types of programme (novice, intermediate and experienced) be provided to cater for the different mountaineering experiences. The knowledge could be designed with

emphasis on practice, positive attitude and behaviour, concern about safety and security, and could be delivered in a friendly and relaxed atmosphere.

In the current study, agreeableness, openness to experience, extraversion and conscientiousness are the personality traits which influence responsible mountaineering behaviour through attitude toward behaviour. Managers could enhance educational programmes using both direct and indirect strategies. In indirect strategies, managers could increase the knowledge of guides and instructors so that they could pass this information to the climbers. In direct strategies, managers may need to pay attention to climbers who look nervous, worried and insecure. They may need closer supervision and restraint from mountain guides and park authority.

5.3.3 Marketing contribution

The study results offer some marketing implications. The study confirms that Mount Kinabalu is extremely accessible even to novices, young and inexperienced climbers. Climbers may scale the mountain top without any technical skill and sophisticated equipment, and are able to experience high altitude and cold weather in the tropical latitude. The ease of the climb is evident from the statistics of 53,883 successful summiteers in 2012 alone (Januarius, 2013). Indeed, this very fact may serve as a marketing message to lure prospective climbers to climb Mount Kinabalu.

Spirituality positively influences satisfaction and responsible behaviour among climbers. This information is useful for both marketing communication and new product and services development. The spiritual aspect of the mountain could be further enhanced by encouraging the development of related tourism products and services to attract spiritual tourists. Among examples are yoga and meditation retreats. Better tourism interpretation of

the spiritual values and traditional religious rituals at Mount Kinabalu could be rejuvenated to enhance further the core value of the mountain, other than it just being regarded as the most accessible mountain to climb among climbers.

Climbers recorded a high satisfaction score with their experience at Mount Kinabalu in Sabah. The high satisfaction experience was also recorded among divers in Sipadan (Musa, 2002) and Layang Layang (Musa et al., 2006). This reflects the superior quality tourism products and services offered in all three of Sabah's attractions: Sipadan, Layang Layang and Mount Kinabalu. The high satisfaction score could be highlighted and stressed in marketing communication to attract a constant flow of tourists to Sabah.

The relationship between satisfaction and loyalty intention has been identified in numerous studies. The results of this study indicate that although climbers would share their experience with others and encourage them to climb Mount Kinabalu, they do not wish to return to climb the mountain again. This result is consistent with the demographic profile of the climbers where the majority of them (82.3%) climbed Mount Kinabalu for the first time. The managers may explore how Mount Kinabalu could attract repeat climbers.

5.3.4 Methodological contribution

This study applied SEM, to examine the relationship between spirituality, personality, satisfaction, norms, PBC and attitude toward behaviour with responsible behaviour and loyalty intention among climbers. The researcher used SEM to evaluate the direct and indirect effects of each hypothesis on the theoretical constructs (El-Gohary, 2012; Kenny, 2008). According to the proposed measurement model, the researcher applied SEM to test whether the theoretical hypothesised model was consistent with the collected data. Therefore,

the current study successfully developed an integrated model of responsible mountaineering behaviour using the structural equation model (Figure 5.1).

5.4 Limitations and Suggestions for Future Research

The study has some limitations. Despite the large sample size, which was largely contributed to by the captive circumstances of the data collection venue, which was the large restaurant which served free food and drink after the climb within the National Park. However, from personal communication with the park management, only 60% of the climbers who succeeded in climbing the mountain visited the restaurant. It would be better if the sampling was carried at the Exit Gate where respondents completed the climb. A more systematic and random selection could then be carried out. However, the initial attempt to do so received an extremely poor response from climbers, perhaps due to their exhaustion, and the gloomy prospect of still having to walk quite a distance to the Park Headquarters. The park authority decided that data collection should only be carried out in the comfort of the large restaurant, near the Park Headquarters.

The constructs of attitude and responsible behaviour could have been preceded by in-depth interview to improve the validity and reliability of items used for the construct measurements. Many climber groups came from South Korea and the majority of them could not understand English language, thus they could not participate in this research.

Some of the external constructs which can probably influence responsible behaviour were not examined. Among these constructs are culture, motivation, service quality, personal norm and socio-demographics. Future studies may wish to add these additional variables to examine a more complete picture and model of mountaineering responsible behaviour.

Similar to the previous studies (Ong & Musa, 2011a; Valle et al., 2005), the current study has omitted behavioural intention from the TPB, by measuring direct influence of independent variables on behaviour itself. The inclusion of behavioural intention might have created a better understanding of TPB, in examining the constructs relationship within the model. However, several studies (Lam & Hsu, 2006; Liao et al., 2007; Wang & Ritchie, 2012) have recorded a strong relationship between behaviour intention and behaviour itself. To avoid confusion and possible correlations among items and constructs, this study decided to only measure the behaviour itself. Furthermore, the climbers were surveyed after the completion of their climbs.

There are some future studies that could be carried out in Mount Kinabalu. Firstly, it will be of benefit to explore the satisfaction among climbers with their activity, nature and services experience when climbing Mount Kinabalu. Future research should investigate the impact of personality and spirituality on satisfaction with demographic profile moderating influences such as age, gender and education. Comparing Mount Kinabalu with other mountains (e.g. Mount Fuji and Mount Kilimanjaro) may reveal interesting differences in the scores of constructs and their relationships. The duplication of studies in other settings could produce a more stable model with greater application.

In-depth studies may be carried out among service providers of Mount Kinabalu National Park, such as mountain guides, accommodation providers and park rangers, to gain insight from their perspectives on aspects related to safety and security on the mountain. This will provide balanced information from both the perspective of climbers and service providers.

5.5 Conclusion

This research shows that the TPB and EDT are appropriate theoretical frameworks to assess responsible behaviour and loyalty intention among climbers. The TPB predicts the influence of climbers' attitude, subjective and media norms on responsible mountaineering behaviour. It also confirms the importance of mountaineering attitude, subjective norm and media norm in explaining responsible mountaineering behaviour. This study provides a strong support to the role of mountaineering education that should be disseminated by guides, other climbers, friends and media to positively influence mountaineering attitudes and to also increase responsible mountaineering behaviour.

In this study, the EDT was used to examine the association between satisfaction and loyalty intention of climbers. The results indicate that satisfaction is an important construct to explain loyalty intention. With evidence of low repeat visitation to the Mountain – despite the positive satisfaction and loyalty intention relationship – the park authority may wish to look deeper into diversifying its products and services, to attract not only first-timers but also repeat visitors.

This study applies SEM to investigate the relationships between spirituality, personality, satisfaction, loyalty intention and components of the TPB with responsible mountaineering behaviour. The personality traits are important factors which influence attitude towards behaviour. The influence of attitude and norms on responsible mountaineering behaviour highlights the importance of mountaineering education towards skill development and knowledge about responsible behaviour in the mountain environment in terms of safety and health. It proposes the partial mediation role of knowledge (attitude) in the relationship between spirituality and responsible behavior. The high mean score for

responsible mountaineering behaviour indicated that climbers paid close attention to behaviour related to health and safety.

The current study reveals the exploratory evidence of the existence dimensions and constructs which measure responsible mountaineering behaviour, attitude toward behaviour and norms. The identification and the conformational existence of these dimensions and constructs are among the main outcomes and contributions of this study. The knowledge generated from this study provides a framework which could be used from the perspectives of marketing communication and management of the park, to ensure the increasing safety and security measures to be instituted for the benefit of climbers.

In conclusion, the steady and increasing flow of climbers to the world heritage site of Mount Kinabalu demonstrates the attractiveness of the destination for both domestic and international tourists. Climbers record high overall satisfaction with the quality of experience and services in the mountain. To ensure Mount Kinabalu sustainable tourism business, a continuous effort must be carried out to increase both quality experience among climbers and the provisions of products and services which are required by the climbers. Within these general provisions, health and safety issues which commonly result from climbers' behaviour, will become continuously and increasingly important in the management and marketing of Mount Kinabalu National Park.

References

Agarwal, R., & Prasad, J. (1998). A conceptual and operational definition of personal innovativeness in the domain of information technology. *Information Systems Research, 9*(2), 204-215.

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Bechmann (Eds.), *Action control: From cognition to behavior* (pp. 11-39). New York: Springer Verlag.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Process, 50*(2), 179-211.

Ajzen, I. (2001). Nature and operation of attitudes. *Annual Review of Psychology, 52*(1), 27-58.

Ajzen, I. (2005). *Attitudes, personality, and behavior (2nd ed.).* Milton Keynes, UK: Open University Press/McGraw-Hill.

Ajzen, I., & Driver, B. L. (1992). Application of the theory of planned behavior to leisure choice. *Journal of Leisure Research, 24*(3), 207-224.

Akama, J. S., & Kieti, D. M. (2003). Measuring tourist satisfaction with Kenya's wildlife safari: A case study of Tsavo West National Park. *Tourism Management, 24*(1), 73-81.

Allport, G. W. (1961). *Pattern and growth in personality*. Oxford, England: Holt, Reinhart & Winston.

Ambrož, M., & Ovsenik, R. (2011). Tourist origin and spiritual motives. *Management-Journal of Contemporary Management Issues, 16*(2), 71-86.

Anfraix, R. (2005). Discovery of Nepenthes edwardsiana at Marai Parai. *Acta Botanica Gallica, 152*(2), 205-213.

Arave, L., & Boren, R. (2012). *Walking Salt Lake City: 34 tours of the crossroads of the west, spotlighting urban paths, historic architecture, forgotten places, and religious and cultural icons*. Birmingham: Wilderness Press.

Arbuckle, J. (2008). *Amos 17.0 user's guide*. Chicago, IL: SPSS.

Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology, 40*(4), 471-499.

Arnette, N. C., Mascaro, N., Santana, M. C., Davis, S., & Kaslow, N. J. (2007). Enhancing spiritual well-being among suicidal African American female survivors of intimate partner violence. *Journal of Clinical Psychology, 63*(10), 909-924.

Arrindell, W. A., Heesink, J., & Feij, J. A. (1999). The satisfaction with life scale (SWLS): Appraisal with 1700 healthy young adults in The Netherlands. *Personality and Individual Differences, 26*(5), 815-826.

Athanassopoulos, A., Gounaris, S., & Stathakopoulos, V. (2001). Behavioural responses to customer satisfaction: an empirical study. *European Journal of Marketing, 35*(5/6), 687-707.

Backlund, E. A., & Williams, D. R. (2003, 6-8 April). *A quantitative synthesis of place attachment research: Investigating past experience and place attachment.* Paper presented at the Northeastern Recreation Research Symposium, Bolton Landing, New York, NY.

Backman, S. J., & Crompton, J. L. (1991). The usefulness of selected variables for predicting activity loyalty. *Leisure Sciences, 13*(3), 205-220.

Baker, D. A., & Crompton, J. L. (2000). Quality, satisfaction and behavioral intentions. *Annals of Tourism Research, 27*(3), 785-804.

Bamberg, S., & Möser, G. (2007). Twenty years after Hines, Hungerford, and Tomera: A new meta-analysis of psycho-social determinants of pro-environmental behaviour. *Journal of Environmental Psychology, 27*(1), 14-25.

Bandura, A., Adams, N. E., & Beyer, J. (1977). Cognitive processes mediating behavioral change. *Journal of Personality and Social Psychology., 35*(3), 125-139.

Barrick, M. R., Mount, M. K., & Gupta, R. (2003). Meta-analysis of the relationship between the five-factor model of personality and Holland's occupational types. *Personnel Psychology, 56*(1), 45-74.

Baumgartner, T. A., Strong, C. H., & Hensley, L. D. (2002). *Conducting and reading research in health and human performance*: McGraw-Hill New York.

Bear, G. G., Manning, M. A., & Izard, C. E. (2003). Responsible behavior: The importance of social cognition and emotion. *School Psychology Quarterly, 18*(2), 140-157.

Beedie, P., & Hudson, S. (2003). Emergence of mountain-based adventure tourism. *Annals of Tourism Research, 30*(3), 625-643.

Bernbaum, E. (2006). Sacred mountains: Themes and teachings. *Mountain Research and Development, 26*(4), 304-309.

Bernbaum, E., & Gunnarson, L. (1990). *Sacred mountains of the world*. San Francisco: Sierra Club Books.

Best, H. (2010). Environmental concern and the adoption of organic agriculture. *Society and Natural Resources, 23*(5), 451-468.

Bigné, J. E., & Andreu, L. (2004). Emotions in segmentation: An empirical study. *Annals of Tourism Research, 31*(3), 682-696.

Bigné, J. E., Andreu, L., & Gnoth, J. (2005). The theme park experience: An analysis of pleasure, arousal and satisfaction. *Tourism Management, 26*(6), 833-844.

Bigne, J. E., Sanchez, M. I., & Sanchez, J. (2001). Tourism image, evaluation variables and after purchase behaviour: Inter-relationship. *Tourism Management, 22*(6), 607-616.

Block, J. (1995). A contrarian view of the five-factor approach to personality description. *Psychological Bulletin, 117*(2), 187-215.

Blue, C. L. (1995). The predictive capacity of the theory of reasoned action and the theory of planned behavior in exercise research: An integrated literature review. *Research in Nursing & Health, 18*(2), 105-121.

Blundell, R., & Costa Dias, M. (2000). Evaluation methods for non-experimental data. *Fiscal Studies, 21*(4), 427-468.

Bohner, G., & Dickel, N. (2011). Attitudes and attitude change. *Annual Review of Psychology, 62*(1), 391-417.

Bowerman, B. L., O'Connell, R. T., & Orris, J. B. (2004). *Essentials of business statistics* (3rd Ed.). New York: McGraw-Hill.

Brady, M. J., Peterman, A. H., Fitchett, G., Mo, M., & Cella, D. (1999). A case for including spirituality in quality of life measurement in oncology. *Psycho-Oncology, 8*(5), 417-428.

Braun, N. (2012). *Investigating environmentally responsible behavior: A phenomenological study of the personal behaviors of acknowledged leaders in the area of climate change.* (PhD), Ohio State University.

Breivik, G. (1996). Personality, sensation seeking and risk taking among Everest climbers. *International Journal of Sport Psychology, 27*(3), 308-320.

Bron, T. (2001). Earth and nature-based spirituality (part I): From deep ecology to radical environmentalism. *Religion, 31*(2), 175-193.

Browne, M. W., Cudeck, R., Bollen, K. A., & Long, J. S. (1993). Alternative ways of assessing model fit. *Sage Focus Editions, 154*(1), 136-136.

Brymer, E., Downey, G., & Gray, T. (2009). Extreme sports as a precursor to environmental sustainability. *Journal of Sport & Tourism, 14*(2-3), 193-204.

Burnik, S., Jug, S., Kajtna, T., & Tušak, M. (2009). Differences in personality traits of mountain climbers and non-athletes in Slovenia. *Acta Universitatis Palackianae Olomucensis. Gymnica, 35*(2), 13-18.

Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2nd ed.). New York: Taylor & Francis Group.

Byrne, B. M. (2013). *Structural equation modeling with EQS: Basic concepts, applications, and programming*: Routledge.

Cadotte, E. R., Woodruff, R. B., & Jenkins, R. L. (1987). Expectations and Norms in Models of Consumer Satisfaction. *JMR, Journal of Marketing Research, 24*(3), 305-314.

Cai, L., A., & Bai, B. (2003). Destination image and loyalty. *Tourism Review International, 7, 3*(4), 153-162.

Caprara, G. V., Barbaranelli, C., & Borgogni, L. (1993). The big five questionnaire. A new questionnaire to assess the five factor model. *Personality and Individual Differences, 15*(3), 281-288.

Carducci, B. J. (2009). *The psychology of personality: Viewpoints, research, and applications*. Indiana University Southeas: John Wiley & Sons.

Castanier, C., Scanff, C. L., & Woodman, T. (2010). Who takes risks in high-risk sports? A typological personality approach. *Research Quarterly for Exercise and Sport, 81*(4), 478-484.

Cattell, R. B. (1950). *Personality: A systematic theoretical and factual study*. New York, NY, US: McGraw-Hill.

Cattell, R. B., Eber, H. W., & Tatsuoka, M. M. (1988). *Handbook for the sixteen personality factor questionnaire (16 PF)*. Champaign, Illinois: Institute for Personality and Ability Testing.

Chancellor, C. (2012). Assessing the intention of land trust representatives to collaborate with tourism entities to protect natural areas. *Journal of Sustainable Tourism, 20*(2), 277-296.

Charles, C. M. (1998). *Introduction to educational research (2nd ed.).* White Plains, NY:Longman.

Chen, J. S., & Gursoy, D. (2001). An investigation of tourists' destination loyalty and preferences. *International Journal of Contemporary Hospitality Management, 13*(2), 79-85.

Cheng, S., Lam, T., & Hsu, C. H. C. (2005). Testing the sufficiency of the theory of planned behavior: A case of customer dissatisfaction responses in restaurants. *International Journal of Hospitality Management, 24*(4), 475-492.

Chi, C. G. Q., & Qu, H. (2008). Examining the structural relationships of destination image, tourist satisfaction and destination loyalty: An integrated approach. *Tourism Management, 29*(4), 624-636.

Chida, Y., Steptoe, A., & Powell, L. H. (2009). Religiosity/spirituality and mortality. *Psychotherapy and Psychosomatics, 78*(2), 81-90.

Chien, G. C. L., Yen, I. Y., & Hoang, P. Q. (2012). Combination of Theory of Planned Behavior and Motivation: An Exploratory Study of Potential Beach-based Resorts in Vietnam. *Asia Pacific Journal of Tourism Research, 17*(5), 489-508.

Ching, G. H. (2008). *Sustainable tourism and the influence of privatization in protected area management: A case of Kinabalu Park, Malaysia.* (PhD), University of Bonn.

Ching, G. H. (2009). Mountain guiding in Kinabalu Park: An evaluation of visitor satisfaction. *Borneo Research Journal, 3*(1), 81-91.

Cho, V. (2008). Linking location attractiveness and tourist intention. *Tourism and Hospitality Research, 8*(3), 220-224.

Choi, S. (2010). *Task and relationship conflict in subordinates and supervisors relations: Interaction effects of justice perceptions and emotion management.* (PhD), Louisiana State University.

Choi, T. Y., & Chu, R. (2001). Determinants of hotel guests' satisfaction and repeat patronage in the Hong Kong hotel industry. *International Journal of Hospitality Management, 20*(3), 277-297.

Chon, K. S. (1989). Understanding recreational traveler's motivation, attitude and satisfaction. *Tourism Review, 44*(1), 3-7.

Churchill, G. A., Jr. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research, 16*(1), 64-73.

Churchill Jr, G. A., & Surprenant, C. (1982). An investigation into the determinants of customer satisfaction. *Journal of Marketing Research, 19*(4), 491-504.

Cohen, E. H. (2006). Religious tourism as an educational experience. In D. J. Timothy & D. H. Olsen (Eds.), *Tourism, religion and spiritual journeys* (pp. 78-93). New York: Routledge.

Cook, T. D., Shadish, W., & Wong, V. C. (2006). *Within-study comparisons of experiments and non-experiments: What the findings imply for the validity of different kinds of observational study.* Paper presented at the Symposium on Causality in Jena, Germany.

Costa Jr, P. T., & McCrae, R. R. (1980). Still stable after all these years: Personality as a key to some issues in adulthood and old age. In P. B. Baltes & J. O. G. Brim (Eds.), *Life span development and behavior* (Vol. 3, pp. 65-102). New York: Academic press.

Costa Jr, P. T., & McCrae, R. R. (1992). *Revised NEO personality inventory (NEO PI-R) and NEO Five-Factor Inventory (NEO-FFI)*. Odessa, FL: Psychological Assessment Resources.

Cottrell, S. P. (2003). Influence of sociodemographics and environmental attitudes on general responsible environmental behavior among recreational boaters. *Environment and Behavior, 35*(3), 347-375.

Cottrell, S. P., & Graefe, A. R. (1997). Testing a conceptual framework of responsible environmental behavior. *The Journal of Environmental Education, 29*(1), 17-27.

Cronin, C. (1991). Sensation seeking among mountain climbers. *Personality and Individual Differences, 12*(6), 653-654.

Cronin, J. J., Brady, M. K., & Hult, G. T. M. (2000). Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *Journal of Retailing, 76*(2), 193-218.

Cronon, W. (1996). The trouble with wilderness: Or, getting back to the wrong nature. *Environmental History,* 1(1), 7-28.

Csikszentmihalyi, M. (1992). *Flow: The psychology of happiness*. London, UK: Rider.

Curry, N. R., Joseph, D. H., & Slee, B. (2001). To climb a mountain? Social inclusion and outdoor recreation in Britain. *World Leisure Journal, 43*(3), 3-15.

De Cannière, M. H., De Pelsmacker, P., & Geuens, M. (2009). Relationship quality and the theory of planned behavior models of behavioral intentions and purchase behavior. *Journal of Business Research, 62*(1), 82-92.

De Foucault, B. (2000). Contribution to the knowledge of ecological and phytosociological affinities of Malaysian Nepenthes. *Acta Botanica Gallica, 147*(1), 111-115.

De Young, R. (2002). New ways to promote proenvironmental behavior: Expanding and evaluating motives for environmentally responsible behavior. *Journal of Social Issues, 56*(3), 509-526.

Del Bosque, I. R., & Martín, H. S. (2008). Tourist satisfaction a cognitive-affective model. *Annals of Tourism Research, 35*(2), 551-573.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*(1), 71-75.

Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology, 41*(1), 417-440.

Dishman, R. K., Ickes, W., & Morgan, W. P. (1980). Self-Motivation and Adherence to Habitual Physical Activity1. *Journal of Applied Social Psychology, 10*(2), 115-132.

Downey, H. K., & Ireland, R. D. (1979). Quantitative versus qualitative: Environmental assessment in organizational studies. *Administrative Science Quarterly, 24*(4), 630-637.

Eagly, A. H., & Chaiken, S. (2007). The advantages of an inclusive definition of attitude. *Social Cognition, 25*(5), 582-602.

Eagly, A. H., Chaiken, S., & Orlando, F. (1993). *The psychology of attitudes*. US: Harcourt Brace Jovanovich College Publishers.

El-Gohary, H. (2012). Factors affecting E-Marketing adoption and implementation in tourism firms: An empirical investigation of Egyptian small tourism organisations. *Tourism Management, 33*(5), 1256-1269.

Ellison, C. W. (1983). Spiritual well-being: Conceptualization and measurement. *Journal of Psychology and Theology, 11*(4), 330-340.

Ewert, A. (1985). Why people climb: The relationship of participant motives and experience level to mountaineering. *Journal of Leisure Research, 17*(3), 241-250.

Ewert, A. (1994). Playing the Edge: Motivation and risk-taking in a high altitude wilderness-like environmrnt. *Environment and Behavior, 26*(1), 3-24.

Ewert, A., & Jamieson, L. (2003). Current status and future directions in the adventure tourism industry. In J. Wilks & S. J. Page (Eds.), *Managing tourist health and safety in the new millennium* (pp. 67-84). Oxford, UK: Pergamon.

Ewert, A., & Sibthorp, R. J. (2014). *Outdoor adventure education: Foundations, theory, and research*. Champaign: Human Kinetics.

Eysenck, H. J. (1968). *Eysenck personality inventory*. San Diego, Calif: Educational and Industrial Testing Service.

Fahlberg, L. L., & Fahlberg, L. A. (1991). Exploring spirituality and consciousness with an expanded science: Beyond the ego with empiricism, phenomenology, and contemplation. *American Journal of Health Promotion, 5*(4), 273-281.

Faullant, R., Matzler, K., & Füller, J. (2008). The impact of satisfaction and image on loyalty: The case of Alpine ski resorts. *Managing Service Quality, 18*(2), 163-178.

Faullant, R., Matzler, K., & Mooradian, T. A. (2011). Personality, basic emotions, and satisfaction: Primary emotions in the mountaineering experience. *Tourism Management, 32*(6), 1423-1430.

Feist, G. J. (2010). The function of personality in creativity: The nature and nurture of the creative personality. In J. C. Kaufman & R. J. Sternberg (Eds.), *Cambridge handbook of creativity* (pp. 113-130). New York: Cambridge University Press.

Feist, J., & Feist, G. J. (2009). Theories of personality (7th): Boston, MA: McGraw-Hill.

Fernando, M., & Chowdhury, R. M. M. I. (2010). The relationship between spiritual well-being and ethical orientations in decision making: An empirical study with business executives in Australia. *Journal of Business Ethics, 95*(2), 211-225.

Finkelstein, F. O., West, W., Gobin, J., Finkelstein, S. H., & Wuerth, D. (2007). Spirituality, quality of life and the dialysis patient. *Nephrology Dialysis Transplantation, 22*(9), 2432-2434.

Firestone, W. A. (1987). Meaning in method: The rhetoric of quantitative and qualitative research. *Educational Researcher, 16*(7), 16-21.

Fischer, E., & Reuber, A. R. (2011). Social interaction via new social media: (How) can interactions on Twitter affect effectual thinking and behavior? *Journal of Business Venturing, 26*(1), 1-18.

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Reading, Mass. Don Mills, Ontario: Addison-Wesley Pub. Co.

Fisher, J. (1998). *Spiritual health: Its nature and place in the school curriculum.* (PhD), University of Melbourne.

Fisher, J. (2002). *Enhancing university students' spiritual well-being*. Paper presented at the Research for a better community: Proceedings of the University of Ballarat second annual research conference, Ballarat: University of Ballarat.

Fisher, J. (2010). Development and application of a spiritual well-being questionnaire called SHALOM. *Religions, 1*(1), 105-121.

Fisher, J. (2011). The four domains model: Connecting spirituality, health and well-being. *Religions, 2*(1), 17-28.

Fisher, J. (2012). The importance of relating with God for spiritual well-being. In M. C. Fowler, M. Weiss & J. L. Hochheimer (Eds.), *In Spirituality: New Reflections on Theory, Praxis & pedagogy* (pp. 147-161). Oxford, UK: Inter Disciplinary Press.

Font, A. R. (2000). Mass tourism and the demand for protected natural areas: A travel cost approach. *Journal of Environmental Economics and Management, 39*(1), 97-116.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50.

Francken, D. A., & Raaij, F. (1981). Satisfaction with leisure time activities. *Journal of Leisure Research, 13*(4), 337-352.

Freixanet, M. G. (1991). Personality profile of subjects engaged in high physical risk sports. *Personality and Individual Differences, 12*(10), 1087-1093.

Fritsch, P. W., & Bush, C. M. (2011). A New Species of Gaultheria (Ericaceae) from Mount Kinabalu, Borneo, Malaysia. *Novon, 21*(3), 338-342.

Funder, D. C. (2001). Accuracy in personality judgment: Research and theory concerning an obvious question. In B. W. Roberts & R. Hogan (Eds.), *Personality psychology in the workplace* (pp. 121−140). Washington, DC: American Psychological Association.

Gagne, P., & Hancock, G. R. (2006). Measurement model quality, sample size, and solution propriety in confirmatory factor models. *Multivariate Behavioral Research, 41*(1), 65-83.

Gerbing, D. W., & Anderson, J. C. (1988). An updated paradigm for scale development incorporating unidimensionality and its assessment. *Journal of Marketing Research, 25*(2), 186-192.

Goh, Y. N. (2014). *Customers' revisit intention on Penang Boutique Hotel at George Town UNESCO's World Heritage Site: A conceptual paper*. Boca Raton: Crc Press-Taylor & Francis Group.

Gomez, R., & Fisher, J. W. (2003). Domains of spiritual well-being and development and validation of the Spiritual Well-Being Questionnaire. *Personality and Individual Differences, 35*(8), 1975-1991.

Gomez, R., & Fisher, J. W. (2005). The spiritual well-being questionnaire: Testing for model applicability, measurement and structural equivalencies, and latent mean differences across gender. *Personality and Individual Differences, 39*(8), 1383-1393.

Gordon, T. P., & Porter, J. C. (2009). Reading and understanding academic research in accounting: A guide for students. *Global Perspectives on Accounting Education, 6*(1), 25-45.

Gosling, S. D., Rentfrow, P. J., & Swann, W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality, 37*(6), 504-528.

Greenwald, A. G., Poehlman, T. A., Uhlmann, E. L., & Banaji, M. R. (2009). Understanding and using the Implicit Association Test: III. Meta-analysis of predictive validity. *Journal of Personality and Social Psychology, 97*(1), 17-41.

Grönroos, C. (1990). *Service management and marketing: Managing the moments of truth in service competition*. Lexington, MA: Lexington Books

Groves, R. M. (1987). Research on survey data quality. *The Public Opinion Quarterly, 51*(2), 156-172.

Gunther, A. C., Bolt, D., Borzekowski, D. L., Liebhart, J. L., & Dillard, J. P. (2006). Presumed influence on peer norms: How mass media indirectly affect adolescent smoking. *Journal of Communication, 56*(1), 52-68.

Gursoy, D., Jurowski, C., & Uysal, M. (2002). Resident attitudes: A Structural Modeling Approach. *Annals of Tourism Research, 29*(1), 79-105.

Gyimóthy, S., & Mykletun, R. J. (2004). Play in adventure tourism: The case of arctic trekking. *Annals of Tourism Research, 31*(4), 855-878.

Hair, Jr. J. F., Black, W., Babin, B., & Anderson, R. (2010). *Multivariate data analysis: A global perspective* (7th ed.). New Jersey: Pearson.

Hair Jr, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis* (5th ed.). Upper Saddle River, NJ: Prentice Hall.

Hall, C. M., & Weiler, B. (1992). Adventure, sport and health tourism, special interest tourism. In B. Weiler & C. M. Hall (Eds.), *Special interest tourism* (pp. 141-158). London: Belhaven press.

Hallowell, R. (1996). The relationships of customer satisfaction, customer loyalty, and profitability: An empirical study. *International Journal of Service Industry Management, 7*(4), 27-42.

Halpenny, E. A. (2006). *Environmental behaviour, place attachment and park visitation: A case study of visitors to Point Pelee National Park*: University of Waterloo Waterloo, Ontario, Canada.

Hamilton, L. S., & McMillan, L. (2004). *Guidelines for planning and managing mountain protected areas*. Switzerland and Cambridge, UK: IUCN, Gland.

Han, H., & Kim, Y. (2010). An investigation of green hotel customers' decision formation: Developing an extended model of the theory of planned behavior. *International Journal of Hospitality Management, 29*(4), 659-668.

Han, H., Kim, Y., & Kim, E.-K. (2011). Cognitive, affective, conative, and action loyalty: Testing the impact of inertia. *International Journal of Hospitality Management, 30*(4), 1008-1019.

Han, H., Lee, S., & Lee, C. K. (2011). Extending the Theory of Planned Behavior: Visa Exemptions and the Traveller Decision-making Process. *Tourism Geographies, 13*(1), 45-74.

Han, H., & Ryu, K. (2012). The theory of repurchase decision-making (TRD): Identifying the critical factors in the post-purchase decision-making process. *International Journal of Hospitality Management, 31*(3), 786-797.

Hathaway, S. R., & McKinley, J. C. (1943). *The Minnesota multiphasic personality inventory (Rev. ed., 2nd printing)*. Minneapolis, MN, US: University of Minnesota Press.

Hill, B. J. (1995). A guide to adventure travel. *Parks & Recreation (Arlington), 30*(9), 56-65.

Hill, P. C., & Pargament, K. I. (2003). Advances in the conceptualization and measurement of religion and spirituality: Implications for physical and mental health research. *American Psychologist, 58*(1), 64-74.

Hinch, T., & Higham, J. E. S. (2011). *Aspects of Tourism, Sport Tourism Development, Second Edition* (2 ed.): Channel View Publications.

Hines, J. M., Hungerford, H. R., & Tomera, A. N. (1987). Analysis and synthesis of research on responsible environmental behavior: A meta-analysis. *The Journal of Environmental Education, 18*(2), 1-8.

Hirsh, J. B. (2010). Personality and environmental concern. *Journal of Environmental Psychology, 30*(2), 245-248.

Hirsh, J. B., & Dolderman, D. (2007). Personality predictors of consumerism and environmentalism: A preliminary study. *Personality and Individual Differences, 43*(6), 1583-1593.

Homburg, C., & Giering, A. (2001). Personal characteristics as moderators of the relationship between customer satisfaction and loyalty—an empirical analysis. *Psychology and Marketing, 18*(1), 43-66.

Howat, G., Crilley, G., & Mcgrath, R. (2008). A focused service quality, benefits, overall satisfaction and loyalty model for public aquatic centres. *Managing Leisure, 13*(3), 139-161.

Hrubes, D., Ajzen, I., & Daigle, J. (2001). Predicting hunting intentions and behavior: An application of the theory of planned behavior. *Leisure Sciences, 23*(3), 165-178.

Hsu, C. H., & Huang, S. (2012). An extension of the theory of planned behavior model for tourists. *Journal of Hospitality & Tourism Research, 36*(3), 390-417.

Hsu, M. S. (2012). A study of internship attitude, subjective norm, perceived behavioral control, and career planning of hospitality vocational college students. *Journal of Hospitality Leisure Sport & Tourism Education, 11*(1), 5-11.

Hu, L., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods, 3*(4), 424-453.

Hudson, S. (2003). *Sport and adventure tourism*. Binghamton, NY: The Haworth Hospitality Press.

Hui, T. K., Wan, D., & Ho, A. (2007). Tourists' satisfaction, recommendation and revisiting Singapore. *Tourism Management, 28*(4), 965-975.

Hull, J. G., Lehn, D. A., & Tedlie, J. C. (1991). A general approach to testing multifaceted personality constructs. *Journal of Personality and Social Psychology, 61*(6), 932-945.

Hungerford, H. R., & Volk, T. L. (1990). Changing learner behavior through environmental education. *Journal of Environmental Education, 21*(3), 8-22.

Hunt, H. K. (1977). *Conceptualization and measurement of consumer satisfaction and dissatisfaction*: Marketing Science Institute.

Huntsinger, L., & Fernández-Giménez, M. (2000). Spiritual pilgrims at Mount Shasta, California. *Geographical Review, 90*(4), 536-558.

Jack, S., & Ronan, K. R. (1998). Sensation seeking among high-and low-risk sports participants. *Personality and Individual Differences, 25*(6), 1063-1083.

Jalilvand, M. R., & Samiei, N. (2012). The impact of electronic word of mouth on a tourism destination choice Testing the theory of planned behavior (TPB). *Internet Research, 22*(5), 591-612.

Januarius, S. (2013). Injured, lost, deceased and total number of mountaineers from 2005 to 2012. Kota Kinabalu: Statistics office in Kinabalu National Park.

John, O. P., & Srivastava, S. (2010). The Big Five Trait Taxonomy: History, Measurement, and Theoretical Perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of Personality: Theory and Research* (pp. 102-138). New York/ London: Guilford Press.

Johnston, B. R., & Edwards, T. (1994). The commodification of mountaineering. *Annals of Tourism Research, 21*(3), 459-478.

Jöreskog, K. G. (1993). Testing structural equation models. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models. sage focus editions* (pp. 294-325). California: Sage Publications, Inc.

Joreskog, K. G., & Sorbom, D. (1982). Recent developments in structural equation modeling. *Journal of Marketing Research, 19*(4), 404-416.

Jöreskog, K. G., & Sörbom, D. (1984). *LISREL-VI: Analysis of linear structural relationships by maximum likelihood, instrumental variables, and least squares methods*. [computer software], Mooresville, IN: Scientific Software.

Joynathsing, C., & Ramkissoon, H. (2010). Understanding the Behavioral Intention of European Tourists. *International Research Symposium in Service Management*, Mauritius, 24-27 August 2010.

Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology, 87*(3), 530-541.

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons, 53*(1), 59-68.

Kaplanidou, K., & Gibson, H. J. (2010). Predicting Behavioral Intentions of Active Event Sport Tourists: The Case of a Small-scale Recurring Sports Event. *Journal of Sport & Tourism, 15*(2), 163-179.

Kenny, D. A. (2008). Reflections on mediation. *Organizational Research Methods, 11*(2), 353-358.

Kim, A. K., Airey, D., & Szivas, E. (2011). The multiple assessment of interpretation effectiveness: Promoting visitors' environmental attitudes and behavior. *Journal of Travel Research, 50*(3), 321-334.

Kim, K. (2008). Analysis of structural equation model for the student pleasure travel market: Motivation, involvement, satisfaction, and destination loyalty. *Journal of Travel & Tourism Marketing, 24*(4), 297-313.

Kim, Y. G., Suh, B. W., & Eves, A. (2010). The relationships between food-related personality traits, satisfaction, and loyalty among visitors attending food events and festivals. *International Journal of Hospitality Management, 29*(2), 216-226.

Koenig, H. G., Larson, D. B., & Larson, S. S. (2001). Religion and coping with serious medical illness. *Annals of Pharmacotherapy, 35*(3), 352-359.

Koufteros, X. A. (1999). Testing a model of pull production: A paradigm for manufacturing research using structural equation modeling. *Journal of Operations Management, 17*(4), 467-488.

Kozak, M., & Rimmington, M. (2000). Tourist satisfaction with Mallorca, Spain, as an off-season holiday destination. *Journal of Travel Research, 38*(3), 260-269.

Krosnick, J. A., Judd, C. M., & Wittenbrink, B. (2005). The Measurement of Attitudes. In D. Albarracín, T. J. Blair & P. Z. Mark (Eds.), *The handbook of attitudes.* (pp. 21-76). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Kumar, R. (2010). *Research methodology: A step-by-step guide for beginners*. Asia Pacific Ltd, ISBN: Sage Publications

Lam, T., & Hsu, C. H. C. (2004). Theory of planned behavior: Potential travelers from China. *Journal of Hospitality & Tourism Research, 28*(4), 463-482.

Lam, T., & Hsu, C. H. C. (2006). Predicting behavioral intention of choosing a travel destination. *Tourism Management, 27*(4), 589-599.

Lee, C., Yoon, Y.-S., & Lee, S.-K. (2007). Investigating the relationships among perceived value, satisfaction, and recommendations: The case of the Korean DMZ. *Tourism Management, 28*(1), 204-214.

Lee, J., Graefe, A. R., & Burns, R. C. (2004). Service quality, satisfaction, and behavioral intention among forest visitors. *Journal of Travel & Tourism Marketing, 17*(1), 73-82.

Lee, K., & Gould, R. (2011). Predicting congregate meal program participation: Applying the extended theory of planned behavior. *International Journal of Hospitality Management, 31*(3), 828-836.

Lee, T. (2007). An ecotourism behavioural model of national forest recreation areas in Taiwan. *International Forestry Review, 9*(3), 771-785.

Lee, T. (2011). How recreation involvement, place attachment and conservation commitment affect environmentally responsible behavior. *Journal of Sustainable Tourism, 19*(7), 895-915.

Liao, C., Chen, J.-L., & Yen, D. C. (2007). Theory of planning behavior (TPB) and customer satisfaction in the continued use of e-service: An integrated model. *Computers in Human Behavior, 23*(6), 2804-2822.

Ling, M. L. M., Bagul, A. H. B. P., & Furuoka, F. (2007). *Domestic and international tourists intention to visit Malaysias world heritage site: A study of Kinabalu National Park*. Paper presented at the Tourism and Hospitality – Planning and Managing Heritage for the Future, Putrajaya, Malaysia: University of Utara.

Lipscombe, N. (1999). The relevance of the peak experience to continued skydiving participation: A qualitative approach to assessing motivations. *Leisure Studies, 18*(4), 267-288.

Liu, A. (2006). Tourism in rural areas: Kedah, Malaysia. *Tourism Management, 27*(5), 878-889.

Loehlin, J. C., McCrae, R. R., Costa, P. T., & John, O. P. (1998). Heritabilities of common and measure-specific components of the Big Five personality factors. *Journal of Research in Personality, 32*(4), 431-453.

Loewenstein, G. (1999). Because it is there: The challenge of mountaineering… for utility theory. K*yklos, 52*(3), 315-343.
Lonsdale, C., Hodge, K., & Rose, E. (2009). Athlete burnout in elite sport: A self-determination perspective. *Journal of Sports Sciences, 27*(8), 785-795.
Lounsbury, J. W., Park, S.-H., Sundstrom, E., Williamson, J. M., & Pemberton, A. E. (2004). Personality, career satisfaction, and life satisfaction: Test of a directional model. *Journal of Career Assessment, 12*(4), 395-406.
Lu, C.-S., Lai, K.-h., & Cheng, T. (2007). Application of structural equation modeling to evaluate the intention of shippers to use Internet services in liner shipping. *European Journal of Operational Research, 180*(2), 845-867.
Lynham, S. A. (2002). The general method of theory-building research in applied disciplines. *Advances in Developing Human Resources, 4*(3), 221-241.
Maher, P. T., & Potter, T. G. (2001). A life to risk: Cultural differences in motivations to climb among elite male mountaineers. In G. Kyle (Ed.), *Proceedings of the 2000 Northeastern Recreation Research Symposium. Gen. Tech. Rep. NE-276* (pp. 155-158). Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northeastern Research Station.
Maloney, M. P., & Ward, M. P. (1973). Ecology: Let's hear from the people: An objective scale for the measurement of ecological attitudes and knowledge. *American Psychologist, 28*(7), 583-586.
Maloney, M. P., Ward, M. P., & Braucht, G. N. (1975). A revised scale for the measurement of ecological attitudes and knowledge. *American Psychologist, 30*(7), 787-790.
Mansager, E., & Eckstein, D. (2002). The Transformative Experience Questionnaire (TEQ): Spirituality in a Couples Context. *Family Journal: Counseling and Therapy for Couples and Families, 10*(2), 227-233.
Markowitz, E. M., Goldberg, L. R., Ashton, M. C., & Lee, K. (2012). Profiling the "pro-environmental individual": A personality perspective. *Journal of Personality, 80*(1), 81-111.
Maroudas, L., Kyriakaki, A., & Gouvis, D. (2004). A community approach to mountain adventure tourism development. *Anatolia, 15*(1), 5-18.
Marsh, H. W., & Hocevar, D. (1985). Application of confirmatory factor analysis to the study of self-concept: First-and higher order factor models and their invariance across groups. *Psychological Bulletin, 97*(3), 562.
Maslow, A. H., & Pi, K. D. (1964). *Religions, values, and peak-experiences* (Vol. 35): Ohio State University Press Columbus.
Matsui, M., Nishikawa, K., & Yambun, P. (2014). A new Leptolalax from the mountains of Sabah, Borneo (Amphibia, Anura, Megophryidae). Z*ootaxa, 3753*(5), 440-452.
Mattila, A. S. (2006). How affective commitment boosts guest loyalty (and promotes frequent-guest programs). *Cornell Hotel and Restaurant Administration Quarterly, 47*(2), 174-181.
Matzler, K., Füller, J., & Faullant, R. (2007). Customer satisfaction and loyalty to Alpine ski resorts: The moderating effect of lifestyle, spending and customers' skiing skills. *International Journal of Tourism Research, 9*(6), 409-421.
Mayer, F. S., & Frantz, C. M. (2004). The connectedness to nature scale: A measure of individuals' feeling in community with nature. *Journal of Environmental Psychology, 24*(4), 503-515.
McCrae, R. R. (1989). Why I advocate the five-factor model: Joint factor analyses of the NEO-PI with other instruments. In D. M. Buss & N. Cantor (Eds.), *Personality*

psychology: Recent trends and emerging directions (pp. 237-245). New York: Springer-Verlag.

McCrae, R. R., & Costa Jr, P. T. (1985). Comparison of EPI and psychoticism scales with measures of the five-factor model of personality. *Personality and Individual Differences, 6*(5), 587-597.

McCrae, R. R., & Costa Jr, P. T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of personality and Social Psychology, 52*(1), 81-90.

McCrae, R. R., & Costa Jr, P. T. (1997). Personality trait structure as a human universal. *American Psychologist, 52*(5), 509-516.

McCrae, R. R., & Costa Jr, P. T. (2008). Empirical and theoretical status of the five-factor model of personality traits. In G. J. Boyle, G. Matthews & D. H. Saklofske (Eds.), *The sage handbook of personality theory and assessment* (pp. 273-294). London: Sage.

McCrae, R. R., & John, O. P. (1992). An introduction to the five-factor model and its applications. *Journal of Personality, 60*(2), 175-215.

McCrae, R. R., & Terracciano, A. (2005). Universal features of personality traits from the observer's perspective: Data from 50 cultures. *Journal of Personality and Social Psychology, 88*(3), 547-582.

McElroy, J. C., Hendrickson, A. R., Townsend, A. M., & DeMarie, S. M. (2007). Dispositional factors in internet use: Personality versus cognitive style. *MIS Quarterly, 31*(4), 809-820.

Meezenbroek, E., Garssen, B., van den Berg, M., van Dierendonck, D., Visser, A., & Schaufeli, W. B. (2012). Measuring spirituality as a universal human experience: A review of spirituality questionnaires. *Journal of Religion and Health, 51*(2), 336-354.

Melby, J. D. (1994). *Intentions, attitude beliefs, social norm beliefs, and past behavior relationships based upon perceived environmental and health factors for participants involved in outdoor land-based trail recreation in Wisconsin.* (Master of Science), University of Wisconsin-La Crosse.

Millan, A., & Esteban, A. (2004). Development of a multiple-item scale for measuring customer satisfaction in travel agencies services. *Tourism Management, 25*(5), 533-546.

Ministry of Tourism, C. a. E. S. k. (2013). Visitor Arrival Statistics (Sabah), Available from: www.kepkas.sabah.gov.my.

Mischel, W., & Shoda, Y. (1998). Reconciling processing dynamics and personality dispositions. *Annual Review of Psychology, 49*(1), 229-258.

Moberg, D. O. (2002). Assessing and measuring spirituality: Confronting dilemmas of universal and particular evaluative criteria. *Journal of Adult Development, 9*(1), 47-60.

Monasterio, E. (2005). Accident and fatality characteristics in a population of mountain climbers in New Zealand. *The New Zealand Medical Journal, 118*(1208), 1249-1257.

Monasterio, E., Alamri, Y. A., & Mei-Dan, O. (2014). Personality characteristics in a population of mountain climbers. *Wilderness & Environmental Medicine, 25*(2), 214-219.

Muhar, A., Schauppenlehner, T., Brandenburg, C., & Arnberger, A. (2007). *Alpine summer tourism: the mountaineers' perspective and consequences for tourism strategies in Austria.* Paper presented at the Forest Snow and Landscape Research.

Muller, T. E., & Cleaver, M. (2000). Targeting the CANZUS baby boomer explorer and adventurer segments. *Journal of Vacation Marketing, 6*(2), 154-169.
Musa, G. (2002). Sipadan: A SCUBA-diving paradise: An analysis of tourism impact, diver satisfaction and tourism management. *Tourism Geographies, 4*(2), 195-209.
Musa, G., Hall, C. M., & Higham, J. E. S. (2004). Tourism sustainability and health impacts in high altitude adventure, cultural and ecotourism destinations: A case study of Nepal's Sagarmatha National Park. *Journal of Sustainable Tourism, 12*(4), 306-331.
Musa, G., Kadir, S. L. S. A., & Lee, L. (2006). Layang Layang: An empirical study on SCUBA divers' satisfaction. *Tourism in Marine Environments, 2*(2), 89-102.
Musa, G., Seng, W. T., Thirumoorthi, T., & Abessi, M. (2011). The influence of scuba divers' personality, experience, and demographic profile on their underwater behavior. *Tourism in Marine Environments, 7*(1), 1-14.
Naidoo, P., Ramseook-Munhurrun, P., & Seegoolam, P. (2011). An Assessment of Visitor Satisfaction with Nature-Based Tourism Attractions. *International Journal of Management and Marketing Research, 4*(1), 87-98.
National Interfaith Coalition on Aging. (1975). Spiritual well-being: A definition. Athens: Georgia, NICA.
Nepal, S. K. (2002). Mountain ecotourism and sustainable development: Ecology, economics, and ethics. *Mountain Research and Development, 22*(2), 104-109.
Nepal, S. K., & Chipeniuk, R. (2005). Mountain tourism: Toward a conceptual framework. *Tourism Geographies, 7*(3), 313-333.
Ng, J. Y. Y., Lonsdale, C., & Hodge, K. (2011). The Basic Needs Satisfaction in Sport Scale (BNSSS): Instrument development and initial validity evidence. *Psychology of Sport and Exercise, 12*(3), 257-264.
Niininen, O., Szivas, E., & Riley, M. (2004). Destination loyalty and repeat behaviour: An application of optimum stimulation measurement. *International Journal of Tourism Research, 6*(6), 439-447.
Norland, E. V. T. (1990). Controlling error in evaluation instruments. *J Extn, 28*(2), Available from http://www.joe.org/joe/1990summer/tt1992.html.
Nunkoo, R., & Ramkissoon, H. (2010). Gendered theory of planned behaviour and residents' support for tourism. *Current Issues in Tourism, 13*(6), 525-540.
Nunnally, J. C. (1978). Psychometric theory: McGraw-Hill (New York).
Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory*. New York: McGraw.
O'Leary-Kelly, S. W., & Vokurka, R. J. (1998). The empirical assessment of construct validity. *Journal of Operations Management, 16*(4), 387-405.
O'Brien, R. M. (2007). A caution regarding rules of thumb for variance inflation factors. *Quality & Quantity, 41*(5), 673-690.
Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of marketing research, 17*(November), 460-469.
Oliver, R. L. (1997). *Satisfaction: A behavioral perspective on the consumer*. New York, NY: Irwin-McGraw-Hill.
Oliver, R. L. (1999). Whence consumer loyalty? T*he Journal of Marketing, 63*(Special Issue), 33-44.
Oliver, R. L. (2010). *Satisfaction: A behavioral perspective on the consumer* (Second ed.). NewYork, Armonk: ME Sharpe.
Ong, T. F., & Musa, G. (2011a). An examination of recreational divers' underwater behaviour by attitude–behaviour theories. *Current Issues in Tourism, 14*(8), 779-795.

Ong, T. F., & Musa, G. (2011b). *Explaining recreationist responsible behaviour: A case of scuba diving.* (PhD), University of Malaya, Kuala Lumpur.
Ong, T. F., & Musa, G. (2011c). SCUBA divers' underwater responsible behaviour: Can environmental concern and divers' attitude make a difference? *Current Issues in Tourism, 15*(4), 329-351.
Ong, T. F., & Musa, G. (2012). Examining the influences of experience, personality and attitude on SCUBA divers' underwater behaviour: A structural equation model. *Tourism Management, 33*(6), 1521-1534.
Oreg, S., & Katz-Gerro, T. (2006). Predicting proenvironmental behavior cross-nationally. *Environment and Behavior, 38*(4), 462-483.
Osbaldiston, R., & Sheldon, K. M. (2003). Promoting internalized motivation for environmentally responsible behavior: A prospective study of environmental goals. *Journal of Environmental Psychology, 23*(4), 349-357.
Ouellette, J. A., & Wood, W. (1998). Habit and intention in everyday life: The multiple processes by which past behavior predicts future behavior. *Psychological Bulletin, 124*(1), 54-74.
Pace, R. (2007). The species of Oligotini, Leucocraspedini, Hygronomini, Placusini, Bolitocharini and Diestotini from Borneo (Coleoptera, Staphylinidae). *Revue Suisse De Zoologie, 114*(4), 771-815.
Parasuraman, A. (2005). ES-QUAL: A multiple-item scale for assessing electronic service quality. *Journal of Service Research, 7*(3), 213-233.
Pavot, W., & Diener, E. (1993). Review of the satisfaction with life scale. *Psychological Assessment, 5*(2), 164-172.
Perugini, M., & Bagozzi, R. P. (2001). The role of desires and anticipated emotions in goal-directed behaviours: Broadening and deepening the theory of planned behaviour. *British Journal of Social Psychology, 40*(1), 79-98.
Petrick, J. F. (2004). Are loyal visitors desired visitors? *Tourism Management, 25*(4), 463-470.
Phares, E. J. (1991). *Introduction to psychology* (3rd Ed.). New York: Harper Collins.
Pollard, A. J., & Murdoch, D. R. (2003). *The high altitude medicine handbook* (3th Ed.). Abingdon, UK: Radcliffe Medical Press Ltd.
Pomfret, G. (2006). Mountaineering adventure tourists: A conceptual framework for research. *Tourism Management, 27*(1), 113-123.
Pomfret, G. (2011). Package mountaineer tourists holidaying in the French Alps: An evaluation of key influences encouraging their participation. *Tourism Management, 32*(3), 501-510.
Pooley, J. A., & O'Connor, M. (2000). Environmental Education and Attitudes Emotions and Beliefs are what is needed. *Environment and Behavior, 32*(5), 711-723.
Quintal, V. A., Lee, J. A., & Soutar, G. N. (2010). Risk, uncertainty and the theory of planned behavior: A tourism example. *Tourism Management, 31*(6), 797-805.
Ramanaiah, N. V., Clump, M., & Sharpe, J. P. (2000). Personality profiles of environmentally responsible groups. *Psychological Reports, 87*(1), 176-178.
Rammstedt, B., & John, O. P. (2007). Measuring personality in one minute or less: A 10-item short version of the Big Five Inventory in English and German. *Journal of Research in Personality, 41*(1), 203-212.
Reed, P. G. (1991). Self-transcendence and mental health in oldest-old adults. *Nursing Research, 40*(1), 5-11.
Reynolds, P. D. (1971). *A Primer in theory construction*. New York: Macmillan.

Rheims, C. A., & Brescovit, A. D. (2004). Description of four new species of Hersiliidae (Arachnida, Araneae) from Kinabalu National Park, Sabah, Borneo, Malaysia. *Journal of Natural History, 38*(22), 2851-2861.

Rican, P., & Janosova, P. (2005). Spirituality: Its psychological operationalization via measurement of individual differences: A Czech perspective. *Studia Psychologica, 47*(2), 157-165.

Roccas, S., Sagiv, L., Schwartz, S. H., & Knafo, A. (2002). The big five personality factors and personal values. *Personality and Social Psychology Bulletin, 28*(6), 789-801.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological monographs: General and Applied, 80*(1), 1-28.

Salick, J., Biun, A., Martin, G., Apin, L., & Beaman, R. (1999). Whence useful plants? A direct relationship between biodiversity and useful plants among the Dusun of Mt. Kinabalu. *Biodiversity and Conservation, 8*(6), 797-818.

Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology, 4*(3), 219-247.

Schultz, J. R., Simpson, S., & Elfessi, A. M. (2010). The environmental action and philosophy matrix: An exploratory study of the environmental attitudes of recreation management and environmental studies students. *The Journal of Environmental Education, 42*(2), 98-108.

Schultz, P. W., & Zelezny, L. C. (1998). Values and proenvironmental behavior a five-country survey. *Journal of Cross-Cultural Psychology, 29*(4), 540-558.

Schwartz, S. H. (1977). Normative influences on altruism. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 10, pp. 221-279). New York: Academic Press.

Schwartz, S. H., & Howard, J. A. (1981). A normative decision-making model of altruism. In J. Rushton & R. Sorrentino (Eds.), *Altruism and helping behavior* (pp. 189-211). Hillsdale, NJ: Lawrence Erlbaum.

Schwarz, N., & Bohner, G. (2001). The construction of attitudes. In W. L. Barney (Ed.), *Blackwell companions to american history: A companion to 19th-century America* (pp. 436-457). Massachusetts: Blackwell Publishers Ltd.

Seeman, T. E., Dubin, L. F., & Seeman, M. (2003). Religiosity/spirituality and health: A critical review of the evidence for biological pathways. *American Psychologist, 58*(1), 53-63.

Sharpley, R., & Jepson, D. (2011). Rural tourism: A spiritual experience? *Annals of Tourism Research, 38*(1), 52-71.

Shonk, D. J., & Chelladurai, P. (2008). Service quality, satisfaction, and intent to return in event sport tourism. *Journal of Sport Management, 22*(5), 587-602.

Siddiqui, K. (2012). Personality influences on customer satisfaction. *African Journal of Business Management, 6*(11), 4134-4141.

Sirch-Stasko, M. (1996). Spiritually sensitive counseling: Pragmatic considerations. *Counseling and Human Development, 29*(3), 1-11.

Slik, J. W. F., Raes, N., Aiba, S. I., Brearley, F. Q., Cannon, C. H., Meijaard, E., . . . Wulffraat, S. (2009). Environmental correlates for tropical tree diversity and distribution patterns in Borneo. *Diversity and Distributions, 15*(3), 523-532.

Sparks, P., Shepherd, R., & Frewer, L. J. (1995). Assessing and structuring attitudes toward the use of gene technology in food production: The role of perceived ethical obligation. *Basic and Applied Social Psychology, 16*(3), 267-285.

Spenceley, A., Relly, P., Keyser, H., Warmeant, P., McKenzie, M., Mataboge, A., Norton, P., Mahlangu, S., Seif, J. (2002). *Responsible Tourism Manual for South Africa, July 2002*. Pretoria: Continuum International.

Stanford, D. (2006). *Responsible tourism, responsible tourists: What makes a responsible tourist in New Zealand?* (PhD in Tourism Management), Victoria University Wellington.

Stern, P. C. (2000). New environmental theories: Toward a coherent theory of environmentally significant behavior. *Journal of Social Issues, 56*(3), 407-424.

Sundstrom, E., Bell, P. A., Busby, P. L., & Asmus, C. (1996). Environmental psychology 1989-1994. *Annual Review of Psychology, 47*(1), 485-512.

Suwa, H., Yamamoto, H., Okada, I., & Ohta, T. (2006). *Effective Environmental Education Program to Solve Social Dilemma.* Paper presented at the The 12th Annual International Sustainable Development Research, Hong Kong.

Swami, V., Chamorro-Premuzic, T., Snelgar, R., & Furnham, A. (2011). Personality, individual differences, and demographic antecedents of self-reported household waste management behaviours. *Journal of Environmental Psychology, 31*(1), 21-26.

Swarbrooke, J., Beard, C., Leckie, S., & Pomfret, G. (2003). *Adventure tourism: The new frontier*. London: Butterworth-Heinemann.

Swartz, E., Money, A., Remenyi, D., & Williams, B. (1998). *Doing research in business and management: An introduction to process and method*. London: Sage Publications.

Tabernero, C., & Hernández, B. (2011). Self-efficacy and intrinsic motivation guiding environmental behavior. *Environment and Behavior, 43*(5), 658-675.

Tagi, K. (2002). Ecotourism in Malaysia: Policy, Current Status and the Effectiveness,. In O. Abe, M. Takahashi, B. B. Bhandari, A. Nakahata & T. Karasawa (Eds.), *Interim Report FY 2001* (pp. 45-66). Kanagawa: Institute for Global Environmental Strategies (IGES).

Takyu, M., Aiba, S. I., & Kitayama, K. (2002). Effects of topography on tropical lower montane forests under different geological conditions on Mount Kinabalu, Borneo. *Plant Ecology, 159*(1), 35-49.

Tarrant, M. A., & Cordell, H. K. (1997). The effect of respondent characteristics on general environmental attitude-behavior correspondence. *Environment and Behavior, 29*(5), 618-637.

Taylor, S., & Todd, P. (1995). Assessing IT usage: The role of prior experience. *MIS Quarterly, 19*(4), 561-570.

Thapa, B., Graefe, A. R., & Meyer, L. A. (2005). Moderator and mediator effects of scuba diving specialization on marine-based environmental knowledge-behavior contingency. *The Journal of Environmental Education, 37*(1), 53-67.

Thomson, C. J., & Carlson, S. R. (2014). Personality and risky downhill sports: Associations with impulsivity dimensions. *Personality and Individual Differences, 60(1)*, 67-72.

Tok, S. (2011). The Big Five personality traits and risky sport participation. *Social Behavior and Personality: An International Journal, 39*(8), 1105-1111.

Trochim, W. M. K. (2006). Qualitative measures. *Research Measures Knowledge Base* (2nd ed.). Cincinnati, OH: Atomic Dog Publishing.

Valle, P., Rebelo, E., Reis, E., & Menezes, J. (2005). Combining behavioral theories to predict recycling involvement. *Environment and Behavior, 37*(3), 364-396.

Valle, P., Silva, J. A., Mendes, J., & Guerreiro, M. (2006). Tourist satisfaction and destination loyalty intention: A structural and categorical analysis. *International Journal of Business Science and Applied Management, 1*(1), 25-44.

Van Dolen, W., De Ruyter, K., & Lemmink, J. (2004). An empirical assessment of the influence of customer emotions and contact employee performance on encounter and relationship satisfaction. *Journal of Business Research, 57*(4), 437-444.

Vaughan, F. (1991). Spiritual issues in psychotherapy. *The Journal of Transpersonal Psychology, 23*(2), 105-119.

Veasna, S., Wu, W.-Y., & Huang, C.-H. (2013). The impact of destination source credibility on destination satisfaction: The mediating effects of destination attachment and destination image. *Tourism Management, 36*(1), 511-526.

Vella-Brodrick, D. A., & Allen, F. C. (1995). Development and psychometric validation of the mental, physical, and spiritual well-being scale. *Psychological Reports, 77*(2), 659-674.

Vollrath, M., Knoch, D., & Cassano, L. (1999). Personality, risky health behaviour, and perceived susceptibility to health risks. *European Journal of Personality, 13*(1), 39-50.

Wang, J., & Ritchie, B. W. (2012). Understanding accommodation managers' crisis planning intention: An application of the theory of planned behaviour. *Tourism Management, 33*(5), 1057-1067.

Wankel, L. M., & Berger, B. G. (1990). The psychological and social benefits of sport and physical activity. *Journal of Leisure Research, 22*(2), 167-182.

Wells, K., Pfeiffer, M., Lakim, M. B., & Linsenmair, K. E. (2004). Use of arboreal and terrestrial space by a small mammal community in a tropical rain forest in Borneo, Malaysia. *Journal of Biogeography, 31*(4), 641-652.

Windsor, J. S., Firth, P. G., Grocott, M. P., Rodway, G. W., & Montgomery, H. E. (2009). Mountain mortality: A review of deaths that occur during recreational activities in the mountains. *Postgraduate Medical Journal, 85*(1004), 316-321.

Woodside, A. G., & Lysonski, S. (1989). A general model of traveler destination choice. *Journal of Travel Research, 27*(4), 8-14.

Wöran, B., & Arnberger, A. (2012). Exploring relationships between recreation specialization, restorative environments and mountain hikers' flow experience. *Leisure Sciences, 34*(2), 95-114.

Xiang, Z., & Gretzel, U. (2010). Role of social media in online travel information search. *Tourism Management, 31*(2), 179-188.

Xie, F., Zhang, Y. L., & Lu, Z. Y. (2008). *Studies on the Impact of Women's Environmental Consciousness on the Behavior of Being a Responsible Tourist Based on the Theory of Planned Behavior*: Scientific and Technical Development Inc.

Yamada, N., Heo, J., & Hji-Avgoustis, S. (2014). What Contributes to the Intention of Tourism Majors in Korea to Acquire Foreign Language Skills? *Asia-Pacific Education Researcher, 23*(3), 645-654.

Yen, C. H., & Lu, H. P. (2008). Effects of e-service quality on loyalty intention: An empirical study in online auction. *Managing Service Quality, 18*(2), 127-146.

Yoon, Y., & Uysal, M. (2005). An examination of the effects of motivation and satisfaction on destination loyalty: A structural model. *Tourism Management, 26*(1), 45-56.

Yu, L., & Goulden, M. (2006). A comparative analysis of international tourists' satisfaction in Mongolia. *Tourism Management, 27*(6), 1331-1342.

Yüksel, A., & Yüksel, F. (2007). Shopping risk perceptions: Effects on tourists' emotions, satisfaction and expressed loyalty intentions. *Tourism Management, 28*(3), 703-713.

Yuksel, A., Yuksel, F., & Bilim, Y. (2010). Destination attachment: Effects on customer satisfaction and cognitive, affective and conative loyalty. *Tourism Management, 31*(2), 274-284.

Zanna, M. P., & Rempel, J. K. (1988). Attitudes: A new look at an old concept. In I. D. Bar-Tal & A. W. Kruglanski (Eds.), *The social psychology of knowledge* (pp. 315-334). Cambridge, England: Cambridge University Press.

Zeng, B., & Gerritsen, R. (2014). What do we know about social media in tourism? A review. *Tourism Management Perspectives,* 10(1), 27-36.

Zhang, W., Johnson, T. J., Seltzer, T., & Bichard, S. L. (2010). The revolution will be networked the influence of social networking sites on political attitudes and behavior. *Social Science Computer Review, 28*(1), 75-92.

Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research, 37*(2), 197-206.

Zins, A. H. (2002). Consumption emotions, experience quality and satisfaction. *Journal of Travel & Tourism Marketing, 12*(2-3), 3-18.

Zwingmann, C., Klein, C., & Büssing, A. (2011). Measuring religiosity/spirituality: Theoretical differentiations and categorization of instruments. *Religions, 2*(3), 345-357.

QUESTIONNAIRE

UNIVERSITY OF MALAYA
The Leader in Research & Innovation

MOUNT KINABALU MOUNTAINEERS' SURVEY

Apa Khabar!

You are invited to participate in this study entitled **"Factors Influencing Responsible Behaviour Related to Safety and Health on Mountains: A Case Study of Climbers on Mount Kinabalu, Malaysia"**. This project is being conducted by a PhD student, Mahdi Esfahani, under the supervision of Dr. Selina Khoo from the Sports Centre, University of Malaya and Prof. Dr. Ghazali Bin Musa from the Faculty of Business and Accountancy, University of Malaya.

Participation in this study will involve completing a personal information form and a questionnaire pack, and will take around 20 minutes. The answers to the questions in the questionnaire should be based on your personal experiences and hence there are no right or wrong answers.

Your completion and return of the questionnaire indicates that you voluntarily agree to participate in this study. All the information gathered from this survey will be treated with strict confidentiality. Data will be analyzed in aggregate forms, and no individual will be identified.

For further information or questions related to this study please contact:

Mr. Mahdi Esfahani	Dr. Selina Khoo	*Prof. Dr. Ghazali Bin Musa*
Mahdisfh@gmail.com	selina@um.edu.my	Ghazalimz@um.edu.my
016-3648081		

SECTION 1: This section enquires some information about yourself. Please tick (✓) the appropriate box or fill in the blanks.

1. **Your gender**

   ☐ Male ☐ Female

2. **Your nationality:** …….

3. **Your marital status:**

   ☐ Single ☐ Married without children

   ☐ Married with children ☐ Divorced/Widowed

4. **Your age :** …… **years old**

5. **Your highest educational achievement:**

   ☐ Secondary (or less) ☐ Diploma ☐ Bachelor degree

   ☐ Post-graduate ☐ Others (please specify): …….

6. **How many times have you climbed Mount Kinabalu?**

   ☐ It's my first time ☐ I climbed once before

   ☐ I have climbed 2 to 5 times ☐ I have climbed more than 5 times

7. **How do you consider yourself in terms of experience in mountain climbing?**

   ☐ **Novice** (my first mountaineering experience)

   ☐ **Intermediate** (have participated in two to five mountaineering experiences)

   ☐ **Experienced** (have participated in over five mountaineering experiences)

8. **List the mountains of over 2,500 metres that you have climbed before.**

   i. _____ **vi.** _____

   ii. _____ **vii.** _____

   iii. _____ **viii.** _____

   iv. _____ **ix.** _____

   v. _____ **x.** _____

9. **Do you do any other outdoor activities?**

   ☐ **Yes** ☐ **No**

   If yes, which outdoor activities do you do?

SECTION 2: This section enquires about your behaviour in Mount Kinabalu related to health and safety.

Please rate the statements about your behaviour when climbing Mount Kinabalu using the scale given below from 1 (Never), 2 (Rarely), 3 (Sometimes), 4 (Often), to 5 (Always), or NA (Not Applicable)

No	Did you do the following when climbing Mount Kinabalu?	Never				Always	NA
1	Aware of my exact position on the mountain trail	1	2	3	4	5	0
2	Not in a hurry	1	2	3	4	5	0
3	Rest whenever necessary	1	2	3	4	5	0
4	Follow the mountain guide	1	2	3	4	5	0
5	Help other climbers in difficulty	1	2	3	4	5	0
6	Walk away from my group	1	2	3	4	5	0
7	Use the rope when needed	1	2	3	4	5	0
8	Keep myself clean/hygienic in the mountain	1	2	3	4	5	0
9	Drink enough water during the climb	1	2	3	4	5	0
10	Consume high energy food during the climb	1	2	3	4	5	0
11	Inform my mountain guide if I have any health problems	1	2	3	4	5	0
12	Carry a first aid kit	1	2	3	4	5	0
13	Have enough warm clothing	1	2	3	4	5	0
14	Wear comfortable climbing shoes/boots	1	2	3	4	5	0
15	Carry a torch light	1	2	3	4	5	0
16	Carry a rain coat/waterproof jacket	1	2	3	4	5	0
17	Carry a whistle	1	2	3	4	5	0
18	Challenge myself physically	1	2	3	4	5	0
19	Wear adequate warm clothing to avoid hypothermia	1	2	3	4	5	0
20	Use sun block	1	2	3	4	5	0
21	Carry a compass	1	2	3	4	5	0
22	Use sunglasses	1	2	3	4	5	0
23	Use a hat	1	2	3	4	5	0

SECTION 3: This section enquires about your attitude (knowledge, awareness and commitment of mountain climbing), together with the influence of others on your behaviour <u>while climbing Mount Kinabalu.</u>

a. Please indicate your understanding about the following issues by circling a number between 1 (Not at All), 2 (To a Limited Extent), 3 (To a Moderate Extent), 4 (To a Frequent Extent) and 5 (To a Great Extent).

No.	To what extent do you believe that you have knowledge about the following with regard to Mount Kinabalu?	Not at All				To a Great Extent
1	Mountain climbing safety practices	1	2	3	4	5
2	Pre-climb instructions	1	2	3	4	5
3	Pre-climb requirements	1	2	3	4	5
4	Mental preparation before climbing	1	2	3	4	5
5	Weather conditions before climbing	1	2	3	4	5
6	Skills required for climbing	1	2	3	4	5
7	High risk places on the mountain	1	2	3	4	5

b. Please indicate your awareness of the following statements by circling a number between 1 (Not at All), 2 (To a Limited Extent), 3 (To a Moderate Extent), 4 (To a Frequent Extent) and 5 (To a Great Extent).

No.	To what extent are you aware of the following while climbing Mount Kinabalu?	Not at All				To a Great Extent
1	Hypothermia can be avoided by wearing warm clothing	1	2	3	4	5
2	Mountain guides are the best people to lead you to the peak	1	2	3	4	5
3	The danger of climbing alone	1	2	3	4	5
4	The need to be careful, calm and steady when climbing	1	2	3	4	5
5	The weather may change drastically in the mountain	1	2	3	4	5
6	The rock face can be very slippery when it rains	1	2	3	4	5
7	The wind chill factors will drop the temperature to a much lower level	1	2	3	4	5
8	In thick cloud the visibility could be close to zero	1	2	3	4	5

c. Please indicate the extent of your involvement in mountain climbing by circling a number between 1 (Not at All), 2 (To a Limited Extent), 3 (To a Moderate Extent), 4 (To a Frequent Extent) and 5 (To a Great Extent).

No	To what extent do you do the following?	Not at All				To a Great Extent
1	I think about mountain climbing a lot	1	2	3	4	5
2	I often talk and share mountain climbing experiences with my friends	1	2	3	4	5
3	I often talk and share mountain climbing experiences with my family members	1	2	3	4	5
4	I like to be an active member of a mountaineering club	1	2	3	4	5
5	I like to give donations to mountaineering organizations to support their activities	1	2	3	4	5
6	I buy a lot of books/magazines about mountain climbing	1	2	3	4	5

d. Please indicate the extent to which the following people and media influence your behaviour when climbing using the scale given below from 1 (Not at All), 2 (To a Limited Extent), 3 (To a Moderate Extent), 4 (To a Frequent Extent) to 5 (To a Great Extent).

No.	To what extent do the following people and media influence your behaviour when climbing?	Not at All				To a Great Extent
1	Climbing partners/ group members	1	2	3	4	5
2	Other climbers	1	2	3	4	5
3	Family members	1	2	3	4	5
4	Mountain guides	1	2	3	4	5
5	Information from social media (eg. Facebook, Twitter, YouTube, Blog, etc)	1	2	3	4	5
6	Information from mountain climbing websites (eg. www.mountaintrip.com, www.summitclimb.com, etc)	1	2	3	4	5
7	Information from mountain climbing magazines (eg. Climbing, Alpinist, Climb, etc)	1	2	3	4	5
8	Information from destination specific websites (eg. www.sabahtourism.com, www.mountkinabalu.my, etc)	1	2	3	4	5

e. For the following statements, please indicate how strongly you agree or disagree by circling a number between 1 (Strongly Disagree), 2 (Disagree), 3 (Neutral), 4 (Agree) and 5 (Strongly Agree).

No.	Statement	Strongly Disagree				Strongly Agree
1	It is just too difficult for someone like me to do much about my own safety/health during the climb	1	2	3	4	5
2	There is no point in doing what I can for safety/health during the climb, unless others do the same	1	2	3	4	5
3	I am very able to look after myself and my health on the mountain	1	2	3	4	5
4	My group members are committed to looking after each other on the mountain	1	2	3	4	5
5	I trust that my mountain guide will look after my safety on the mountain	1	2	3	4	5

SECTION 4: This section enquires about your satisfaction with your climbing experience and loyalty intention in Mount Kinabalu.

a. Please rate the statements relate to your holiday satisfaction using the scale given below from 1 (Strongly Disagree), 2 (Disagree), 3 (Neutral), 4 (Agree) to 5 (Strongly Agree).

No	Statement	Strongly Disagree				Strongly Agree
1	This climbing trip is exactly what I need	1	2	3	4	5
2	I am satisfied with my decision to climb Mount Kinabalu	1	2	3	4	5
3	I truly enjoyed this vacation in Mount Kinabalu	1	2	3	4	5
4	I am not happy with my decision to climb Mount Kinabalu	1	2	3	4	5
5	I am sure it is right to spend my holiday climbing Mount Kinabalu	1	2	3	4	5

b. Please indicate the likelihood of you to carry out the tasks listed using the scale given below from 1 (Very Unlikely), 2 (Unlikely), 3 (Neutral), 4 (Likely) to 5 (Very Likely).

No	I will ...	Very Unlikely				Very Likely
1	Share my experiences of climbing Mount Kinabalu with others	1	2	3	4	5
2	Recommend Mount Kinabalu climb to others	1	2	3	4	5
3	Encourage friends and others to climb Mount Kinabalu	1	2	3	4	5

SECTION 5: This section enquires about your personality.

Please indicate the accuracy of each statement in describing you, by circling a number between1 (Very Inaccurate), 2 (Inaccurate), 3 (Neutral), 4 (Accurate) and 5 (Very Accurate).

No.	Statement	Very Inaccurate				Very Accurate
1	I make friends easily	1	2	3	4	5
2	I rarely get irritated	1	2	3	4	5
3	I respect others	1	2	3	4	5
4	I feel comfortable with myself	1	2	3	4	5
5	I have a vivid/strong imagination	1	2	3	4	5
6	I carry the conversation to a higher level	1	2	3	4	5
7	I have a good word for everyone	1	2	3	4	5
8	I am always prepared	1	2	3	4	5
9	I accept people as they are	1	2	3	4	5
10	I know how to captivate people	1	2	3	4	5
11	I believe that others have good intentions	1	2	3	4	5
12	I enjoy hearing new ideas	1	2	3	4	5
13	I seldom feel blue	1	2	3	4	5
14	I am not easily bothered by things	1	2	3	4	5
15	I believe in the importance of art	1	2	3	4	5
16	I am skilled in handling social situations	1	2	3	4	5
17	I feel comfortable around people	1	2	3	4	5
18	I get chores done right away	1	2	3	4	5
19	I carry out my plans	1	2	3	4	5
20	I make people feel at ease	1	2	3	4	5
21	I am normally the life in a party	1	2	3	4	5
22	I make plans and stick to them	1	2	3	4	5
23	I tend to vote for liberal political candidates	1	2	3	4	5
24	I am very pleased with myself	1	2	3	4	5
25	I pay attention to details	1	2	3	4	5

SECTION 6: This section enquires about your sense of spirituality.

Spirituality can be described as what lies in the heart of a person. Spiritual health/well-being can be seen as a measure of how good you feel about yourself and how well you relate to those aspects of the world around you which are important to you.

Please give two responses to each of the following items, by circling the numbers in each of the two columns, which represent (a) Ideal state of spiritual health, and (b) your current spiritual experience, using the scale given below.

1 = very low 2 = low 3 = moderate 4 = high 5 = very high.

Do not spend too much time on any one item. It is best to record your first thoughts.

No.	Items	Ideal for spiritual health					How you feel				
1	love of other people	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
2	personal relationship with the Divine/God	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
3	forgiveness toward others	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
4	connection with nature	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
5	sense of identity	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
6	worship of the Creator	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
7	awe at a breathtaking view	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
8	trust between individuals	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
9	self-awareness	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
10	oneness with nature	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
11	oneness with God	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
12	harmony with the environment	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
13	peace with God	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
14	joy in life	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
15	regular prayer	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
16	inner peace	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
17	respect for others	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
18	meaning in life	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
19	kindness toward other people	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
20	sense of ‘magic’ in the environment	**1**	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**

Section 7: this section measures your level of physical activities. Please tick (✓) the appropriate box or fill in the blanks.

This section requires you to recall your typical physical activity. Please answer these questions even if you do not consider yourself to be a physically active person.

Think first about the time you spend doing work. Think of work as the things that you have to do such as paid or unpaid work, study/training, household chores, harvesting food/crops, fishing or hunting for food, seeking employment. In answering the following questions 'vigorous-intensity activities' are activities that require hard physical effort and cause large increases in breathing or heart rate, 'moderate-intensity activities' are activities that require moderate physical effort and cause small increases in breathing or heart rate.

	Questions	Response	Code
Activity at work			
1	Does your work involve vigorous-intensity activity that causes large increases in breathing or heart rate like [carrying or lifting heavy loads, digging or construction work] for at least 10 minutes continuously?	Yes ☐ No ☐ **If No, go to P 4**	**P1**
2	In a typical week, on how many days do you do vigorous-intensity activities as part of your work?	Number of days ⌊__⌋	**P2**
3	How much time do you spend doing vigorous-intensity activities at work on a typical day?	Hours : minutes ⌊__⌋ : ⌊__⌋ hrs mins	**P3 (a-b)**
4	Does your work involve moderate-intensity activity that causes small increases in breathing or heart rate such as brisk walking [or carrying light loads] for at least 10 minutes continuously?	Yes ☐ No ☐ **If No, go to P 7**	**P4**
5	In a typical week, on how many days do you do moderate-intensity activities as part of your work?	Number of days ⌊__⌋	**P5**
6	How much time do you spend doing moderate-intensity activities at work on a typical day?	Hours : minutes ⌊__⌋ : ⌊__⌋ hrs mins	**P6 (a-b)**
Travel to and from places			
The next questions exclude the physical activities at work that you have already mentioned. Now I would like to ask you about the usual way you travel to and from places. For example to work, for shopping, to market, to place of worship.			
7	Do you walk or use a bicycle (pedal cycle) for at least 10 minutes continuously to get to and from places?	Yes ☐ No ☐ **If No, go to P 10**	**P7**
8	In a typical week, on how many days do you walk or bicycle for at least 10 minutes continuously to get to and from places?	Number of days ⌊__⌋	**P8**
9	How much time do you spend walking or bicycling for travel on a typical day?	Hours : minutes ⌊__⌋ : ⌊__⌋ hrs mins	**P9 (a-b)**

Questions		Response	Code
Recreational activities			
The next questions exclude the work and transport activities that you have already mentioned. Now I would like to ask you about sports, fitness and recreational activities (leisure).			
10	Do you do any vigorous-intensity sports, fitness or recreational (leisure) activities that cause large increases in breathing or heart rate like [running or football,] for at least 10 minutes continuously?	Yes ☐ No ☐ **If No, go to P 13**	**P10**
11	In a typical week, on how many days do you do vigorous-intensity sports, fitness or recreational (leisure) activities?	Number of days ⌊__⌋	**P11**
12	How much time do you spend doing vigorous-intensity sports, fitness or recreational activities on a typical day?	Hours : minutes ⌊__⌋⌊__⌋ : ⌊__⌋⌊__⌋ hrs mins	**P12 (a-b)**
13	Do you do any moderate-intensity sports, fitness or recreational (leisure) activities that cause a small increase in breathing or heart rate such as brisk walking, (cycling, swimming, and volleyball) for at least 10 minutes continuously?	Yes ☐ No ☐ **If No, go to P 16**	**P13**
14	In a typical week, on how many days do you do moderate-intensity sports, fitness or recreational (leisure) activities?	Number of days ⌊__⌋	**P14**
15	How much time do you spend doing moderate-intensity sports, fitness or recreational (leisure) activities on a typical day?	Hours : minutes ⌊__⌋⌊__⌋ : ⌊__⌋⌊__⌋ hrs mins	**P15 (a-b)**
Sedentary behaviour			
The following question is about sitting or reclining at work, at home, getting to and from places, or with friends including time spent [sitting at a desk, sitting with friends, travelling in car, bus, train, reading, playing cards or watching television], but do not include time spent sleeping.			
16	How much time do you usually spend sitting or reclining on a typical day?	Hours : minutes ⌊__⌋⌊__⌋ : ⌊__⌋⌊__⌋ hrs mins	**P16 (a-b)**