To Be or Not to Be Green: Triggering Travellers' Behaviour in Australia Using the Theory of Planned Behaviour

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ABSTRACT

The rising levels of global carbon emissions are accelerating climate change and global warming, with devastating effects on many communities. The tourism sector accounts for around eight per cent of carbon emissions (Lenzen, et al., 2018), with the hotel sector generating approximately 21 per cent of these emissions (Lee & Cheng, 2018). In addition, the hotel sector has been allied with adverse impacts on the environment through the depletion of natural resources. However, many hotels are striving to cut down their carbon footprint and level of environmental impact, which has led to the emergence of 'green' hotels. Research into the green hotel context is limited and consumer behaviour in this field has rarely been explored. Further, some issues remain scarcely investigated within the hotel sector, such as the effectiveness of interventions using pictorial elements employing positive and negative framing, and applicable content to gauge travellers' perceptions and intentions to stay at green hotels.

This thesis aims to fill the gap in literature positing the Theory of Planned Behaviour (TPB) as a theoretical framework to provide a deeper understanding of travellers' behaviour towards staying at green hotels. This research employs the TPB full model using beliefs, attitudes, subjective injunctive and descriptive norms, perceived behavioural control and behavioural intention, and extends the theory by adding green hotel knowledge to the TPB framework. This research uses qualitative methods as a foundation for the quantitative study. In phase one, an elicitation study of three focus groups, using open-ended questionnaires, is employed to identify beliefs and any additional predictors that donate to the foundation of Australian travellers' purchasing decisions regarding staying at green hotels. Based on the qualitative results and a review of literature, the preliminary survey instrument was constructed. Subsequently, the preliminary survey instrument was pilot tested from a representative sample of Australian travellers.

In phase two, an online survey is deployed resulting in a total of 771 valid responses. Participants are assigned randomly to either neutral control conditions that received no intervention or two intervention groups. One of the

randomly assigned groups received positively-framed images to evoke green hotels' environmental benefits; the other group received negatively-framed images that indicated environmental pollution. These interventions are designed to examine their effect on travellers' intentions to stay at a green hotel.

The results indicate that the TPB original constructs, except subjective descriptive norms, can positively affect travellers' willingness to stay at green hotels. Particularly, perceived behavioural control is the most significant predictor of travellers' intentions to stay at a green hotel. The findings of the research also reveal that green hotel knowledge may have a direct effect on travellers' willingness to stay at green hotels. Finally, the research has found that travellers' intentions can be significantly different depending on the message framing used to attract their attention.

This research makes several theoretical and practical contributions. Theoretically, the original model of the theory-without extending the social norms into descriptive and injunctive is sufficient to explain travellers' intention/s to stay at a green hotel. The research also extends existing knowledge with regard to the reconceptualisation of the TPB model with the inclusion of an additional dimension of green hotel knowledge. Practically, since green hotel knowledge is a clear barrier to staying intentions, hoteliers may induce perceptions of useful knowledge about green practices implemented in their establishments, to enable travellers to make informed decisions in favour of green accommodation. In addition, results show the superiority of positive over negative messages to impact travellers' intentions to stay at green accommodation. Travellers might be driven to stay at a green hotel if positive green aspects were communicated through a knowledge-based approach in marketing material. Consequently, hotel managers can potentially improve their service development strategies and ultimately help promote their green marketing programs.

STATEMENT OF ORIGINALITY

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

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Refereed Journal Articles:

- Nimri, R., Patiar, A., & Kensbock, S. (2017). A green step forward: Eliciting consumers' purchasing decisions regarding green hotel accommodation in Australia. *Journal of Hospitality and Tourism Management, 33*, 43-50.

  (Related to Chapter 3, 4 and 5).

- Nimri, R., Patiar, A., Kensbock, S., & Jin X. Consumers' intention to stay in green hotels in Australia: Theorisation and implications. Under Review. *Journal of Hospitality and Tourism Research.*

  (Related to Chapter 2 and 3).

Refereed Conference Papers:

- Nimri, R., Patiar, A., Kensbock, S., & Jin X. (June, 2018). Anticipated knowledge in consumers' intentions to visit green hotels: Extending the Theory of Planned Behaviour. Presented at Travel and Tourism Research Association 2018, Miami, United States of America.

  (Related to Chapter 3, 4 and 5).

- Nimri, R., Patiar, A., Kensbock, S., & Jin X. (June, 2018). The power of positivity: How images affect intention to purchase green hotel accommodation. Presented at Graduate Student Colloquium atTravel and Tourism Research Association Conference, 2018, Miami, United States of America.

  (Related to Chapter 3, 4 and 5).

- Nimri, R., Patiar, A., Kensbock, S., & Jin X. (February, 2018). Does the past affect the future? An analysis of consumers' intentions to stay in green hotels in Australia. Presented at Council of Australasian University and Hospitality Education (CAUTHE) 2018, New Castle, Australia.

  (Related to Chapter 2 and 3).

- Nimri, R., Patiar, A., Kensbock, S., & Jin X. (December, 2017). Understanding consumers' intention to stay at green accommodation in Australia: An application

of the Theory of Planned Behaviour. Presented at Travel and Tourism Research Association (TTRA) Asia Pacific Chapter 2017, Hong Kong.

(Related to Chapter 2 and 3).

- Nimri, R., Patiar, A., Kensbock, S., & Jin X. (June, 2017). Examining consumer behavior in the green hotel context in Australia. Presented at Australia and New Zealand Marketing Academy Conference (ANZMAC) 2017 Mid-Year Doctoral Colloquium, Brisbane, Australia.

  (Related to Chapter 2 and 3).

- Nimri, R., Patiar, A., Kensbock, S. (January, 2017). Evaluating guests' behaviour of purchasing hotel accommodation in Australia. Presented at Council of Australasian University and Hospitality Education (CAUTHE) 2017, Dunedin, New Zealand.

  (Related to Chapter 2 and 3).

Awards and Achievements:

- Keeling Dissertation Award Keeling Award granted by Travel and Tourism Research Association (TTRA) for the quality of research, contribution to scholarship, relationship to travel and tourism usefulness, and quality of the paper. TTRA, United States of America, June 2018.
- Winner, 2nd place 3 Minute Thesis Competiton, Griffith Busines School, September 2017.
- Winner, 3 Minute Thesis Competition, Department of Tourism Sport and Hotel Management, Griffith Business School, August 2017.
- Poster Competiton, Griffith University Business School, June 2017.

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CHAPTER 1

INTRODUCTION

1.1 Research Background

Climate change has profoundly affected human societies and the natural environment. Various researchers argue that the impacts of climate change will be destructive and long-lasting (Gergis, 2018; Gössling & Buckley, 2016; Kachel & Jennings, 2010; McLennan, Becken, & Watt, 2016). In addition, the Intergovernmental Panel on Climate Change (IPCC) representing more than 1,300 scientists from 195 countries states that the warming of the climate system is apparent (Chapman & Ciment, 2015; IPCC, 2018). All industry sectors, including tourism, must play their role in supporting mitigation and adaptation measures to diminish climatic change (United Nations Environmental Programme [UNEP], 2016; United Nations World Tourism Organisation & United Nations Environmental Programme [UNWTO & UNEP], 2012).

Globally, tourism is viewed as a highly climate-sensitive economic sector, since the integrated impacts of climate change are expected to have far-reaching effects on tourism destinations and eventually on the long-term success of tourism businesses (Fang, Yin, & Wu, 2018; Prideaux, McKercher, & McNamara, 2015; UNWTO & UNEP, 2012). For instance, currently, tourism contributes around eight per cent of greenhouse emissions (Lenzen, et al., 2018). Within the tourism industry, the hotel sector in particular has been regarded as a significant contributor to the causes of climate change. The hotel sector is an essential component of the tourism value chain and has been criticised for consuming large quantities of energy and producing considerable greenhouse gas emissions (Chan, Okumus, & Chan, 2018; Lee & Cheng, 2018). According to Lee and Cheng (2018) and UNWTO and UNEP (2012), the accommodation sector is responsible for around 21 per cent of total tourism emissions.

Due to the increasing influence of hotel operations on the environment, greening this sector has become a necessity (Teng, Lu, & Huang, 2018) and has led to a

particular interest in the issue of pro-environmental sustainability in the hotel sector. In the hospitality industry, various terms such as ‘green’, ‘sustainable’, ‘environmental’, ‘environmentally friendly’ or ‘environmentally responsible’ have been used interchangeably in referring to activities supporting less degradation of the environment (Han, Hwang, Kim, & Jung, 2015; Yadav, Balaji, & Jebarajakirthy, 2018). Markedly, Yadav et al. (2018) define ‘green hotels’ as properties that invest substantial resources in green practices aiming to minimise energy and water consumption and reduce waste.

Although environmental issues are receiving extensive scientific attention and media publicity, the general public are not following the momentum, still viewing environmentalism as a low priority (Eriksen, 2018). There remains a degree of uncertainty and scepticism about the seriousness of environmental degradation from the general public (Burke, Ockwell, & Whitmarsh, 2018; Zeppel & Beaumont, 2014). In particular, consumer habits are somewhat contradictory; while a growing number of consumers are mindful of the dangers posed by environmental matters and the need to act, they seem to be reluctant to interpret these concerns by voluntarily changing their own consumption patterns (Line & Hanks, 2016).

Similarly, in the accommodation sector, a divide between environmental consciousness and action exists (Yadav et al., 2018). The proportion of travellers deliberately making reservations at green hotels remains small (Line & Hanks, 2016; Ponnapureddy, Priskin, Ohnmacht, Vinzenz, & Wirth, 2017). Research shows that around 10 per cent of travellers actually consider the environment when making tourism-related decisions including their hotel choice (Karlsson & Dolnicar, 2016). Extant literature seems to be lacking in empirical research studies regarding the factors affecting consumer behaviour related to green hotel choice (Han, Hsu, & Lee, 2009; Kim, Palakurthi, & Hancer, 2012; Verma & Chandra, 2018). Dolnicar, Knezevic Cvelbar, and Grün (2017) state that it is crucial to examine the behaviour of consumers in order to implement effective promotional strategies that impact their purchasing choices. Furthermore, there has been a scarcity of studies using a robust theoretical framework for the formation of travellers’ behaviour in selecting an environmentally friendly hotel over the alternatives (Gao, Mattila, & Lee, 2016; Han, Hsu, & Sheu, 2010; Myung,

McClaren, & Li, 2012). Some of the theories previously used to predict consumer behaviour in the green hotel context include the Theory of Planned Behaviour (Chen & Peng, 2012; Chen & Tung, 2014; Verma & Chandra, 2018), the Norm-Activation-Theory (Han et al., 2015), and the Value-Belief-Norm Theory (Han, 2015). The Theory of Planned Behaviour (hereafter denoted TPB), however, remains one of the most dominant theories for examining pro-environmental behaviour (Chen & Tung, 2014; Verma & Chandra, 2018).

Due to its efficacy in explicating a wide range of behaviours, TPB has been successfully utilised in an extensive variety of tourism and hospitality contexts, such as destination choice (Jordan, Bynum Boley, Knollenberg, & Kline, 2017; Lam & Hsu, 2006; Park, Hsieh, & Lee, 2017), international travelling (Lam & Hsu, 2004; Ye, Soutar, Sneddon, & Lee, 2017), holiday cycling (Kaplan, Manca, Nielsen, & Prato, 2015), and lately, environmentally responsible behaviours in choosing a green hotel (Chen & Tung, 2014; Verma & Chandra, 2018) or a green restaurant (Jang, Chung, & Kim, 2015).

TPB postulates that individuals generally consider the consequences of their behaviour before they choose to engage in a given behaviour (Ajzen, 1991). According to Ajzen (2002), an individual's behaviour is directed by three types of beliefs: behavioural beliefs, normative beliefs, and control beliefs. Behavioural beliefs create a positive or negative attitude towards the behaviour, normative beliefs produce perceived social pressure or subjective norm, and control beliefs create perceived behavioural control (Ajzen, 2002). TPB suggests that intention is a function of these three theoretically independent factors: attitude towards the behaviour, subjective norm and perceived behavioural control (Ajzen, 1991). The more favourable the attitude and social norm, as well as the stronger perceived behavioural control there is, the more likely the person will engage in a particular behaviour (Ajzen, 1991). The theory also indicates that an individual's intention to act in a specific manner is the driver of that behaviour (Ajzen, 1991).

Although TPB has been widely employed in social psychology and was supported for its parsimonious interpretation of rational behaviour, its sufficiency has been interrogated (i.e., De Vries, Dijkstra, & Kuhlman, 1988; Towler & Shepherd, 1991). According to these researchers, TPB does not account for all the

discrepancy in behaviour as it leaves a substantial percentage of unexplained discrepancy in intentions and behaviour. Consequently, Ajzen (1991) suggests that the theory can be augmented by including additional determinants to increase the explanatory power of behaviour in different settings. One stream of study focuses on relating consumers' environmental knowledge to their pro-environmental behaviour, reporting that the level of environmental knowledge impacts the environmental intentions of consumers and their planning processes (Hu, Parsa, & Self, 2010; Nimri, Patiar, & Kensbock, 2017). It has been suggested that green hotel knowledge may be added to the model (Chen & Peng, 2012). According to Gifford, Steg and Reser (2011), knowledge influences all stages of the decision-making progression and is vital for building comprehensive interventions that intend to promote environmental behaviour. Moreover, Babakhani, Ritchie, and Dolnicar (2017) highlight the critical importance of knowledge as an antecedent to behaviour change.

Individuals might choose to adopt certain environmental behaviour patterns and, thus, contribute significantly to environmental sustainability; the challenge remains, however, in initially influencing and changing their behaviour (Doppelt, 2017; Stead, Tagg, MacKintosh, & Eadie, 2005; Steg & Vlek, 2009). Interventions are defined in the literature as programmes and strategies intended to change an individual's intention and behaviour (Glanz & Bishop, 2010), which may be implemented under appropriate circumstances (Ajzen, 2017).

Although interventions have been utilised in different contexts to modify behaviour, even the most compelling interventions may well not bring substantial changes in behaviour (Hardeman et al., 2002). This may be because interventions are not based on theories of social behaviour, although such theories have shown success in explaining behaviour (Chatzisarantis & Hagger, 2005; Hardeman et al., 2002; Michie, Johnston, Francis, Hardeman, & Eccles, 2008). This has been confirmed by Kao, Aranda, Krishnasamy, and Hamilton (2017), who indicate that some of the methodological limitations for intervention development are linked to a lack of a theoretical framework. Truong and Dang (2017) further point out that theory-based interventions have been limited in academic research. Therefore, there is a clear call to use more theory-based

interventions and report their implications, which would contribute to the evidence-based progress in impacting behavioural change.

In terms of hospitality-related research, only a few studies have demonstrated that well-designed behavioural interventions can lead to a change in behaviour (Baca-Motes, Brown, Gneezy, Keenan, & Nelson, 2013; Goldstein, Cialdini, & Griskevicius 2008; Mair & Bergin-Seers, 2010). One main approach that has been recognised in the literature to change behaviour is persuasive communication (Ajzen, 2017; Steg & Vlek, 2009). This approach is aimed at changing factors that precede the behaviour by raising awareness, informing choice options, and elaborating on the likelihood of positive or negative outcomes. For instance, communication strategies aiming to induce demand for green hotels should transfer essential and useful aspects to travellers who may not entirely understand the complexity of environmental sustainability (Villarino & Font, 2015). Mair and Bergin-Seers (2010) also found that persuasive communication encourages travellers to engage in green practices and increase their reuse of towels while staying at hotels.

In summary, there is conflicting evidence as to whether there is a demand for green accommodation (Baker, Davis, & Weaver, 2014; Kang, Stein, Heo, & Lee, 2012) and little research has attempted to examine consumer behaviour related to staying at green hotels in a rigorous manner using interventions (Dolnicar et al., 2017; Font & McCabe, 2017; Han, 2015). This research posits that TPB, as a theoretical framework, can provide an in-depth understanding of travellers' pro-environmental behaviour towards staying at green hotels while away from their homes on business or for leisure purposes. This research suggests extending the theory by adding green hotel knowledge to the TPB model and testing the impact of an intervention using persuasive communications on travellers' behavioural intentions towards green hotel accommodation.

1.2 Research Problem

The hotel sector has been acknowledged as a major contributor to greenhouse gas emissions (Lee & Cheng, 2018). Around 75 per cent of adverse environmental effects created by the accommodation sector are attributed to the disproportionate usage of natural resources, energy and water, in addition to

emissions released to air, water and soil (Aboelmaged, 2018; Bohdanowicz, 2006). As this will directly cause depletion of the resources upon which the sector relies, there is evidence of hotels striving to reduce the level of any negative environmental impact (Han & Hwang, 2016; Teng et al., 2018; Yadav et al., 2018).

One way for accommodation providers to decrease the effect of their operations on the environment is through educating travellers to stay at green hotels (Dolnicar et al., 2017). Over recent years, travellers have become progressively more aware of the negative environmental effects of hotel operations (Han, 2015); consequently, it is critical for the hotel sector to respond by exploring the concept of green hotels comprehensively. According to Deloitte (2015), responsible travellers are contributing to hotels' imperative to go green. Green has become the key to increasing market share as well as improving operational efficiencies and is no longer an option for hotels (Chen, Chen, Zhang, & Xu, 2018; Watkins, 2009).

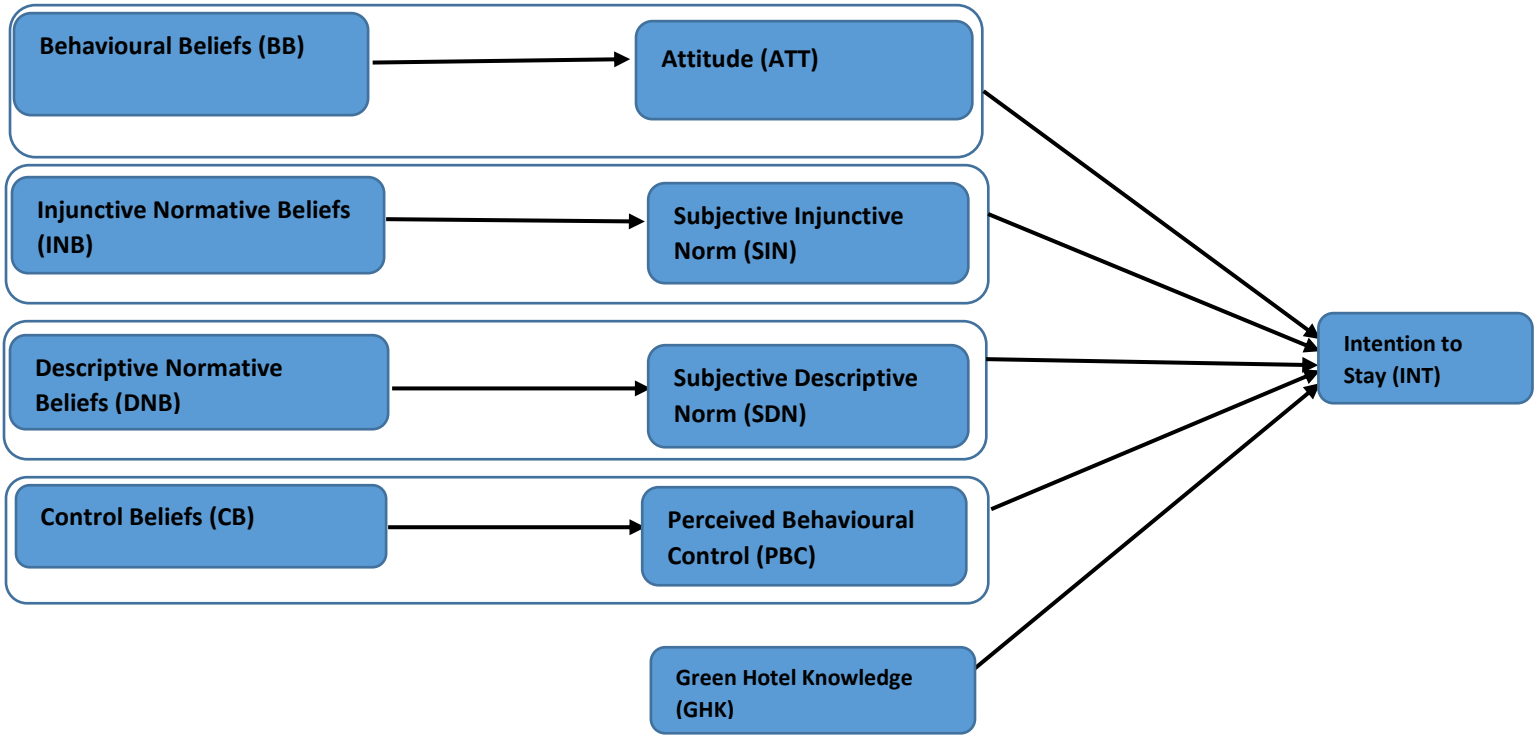
In general, there have been several calls to help advance environmentally related knowledge about travellers' behaviour in the hotel sector in order to provide practical relevance to managers (Myung et al., 2012; Rahman, Park, & Chi, 2015). Extant literature indicates that there is a lack of research related to green accommodation (Baker et al., 2014; Gao et al., 2016; Kim, Lee, & Fairhurst, 2017; Line & Hanks, 2016). Additionally, despite general consumer preference shifting towards environmental responsibility, attracting travellers to green hotels is becoming a challenge (Ponnapureddy et al., 2017). Consequently, such travellers may choose to stay at a green hotel and contribute to environmental sustainability; however, the challenge remains in influencing their behaviour in the first place.

Therefore, the purpose of this study was to explore a theoretical framework based on Fishbein and Ajzen's (2010) TPB model to investigate the underlying factors leading to travellers' intentions to select a green hotel. TPB is one of the profound social-psychological theories for examining and explaining human behaviour (Ajzen, 2002; De Leeuw, Valois, Ajzen, & Schmidt, 2015). Nevertheless, little research has utilised TPB to explain hotel travellers' decision-making process

regarding green hotels (Han, 2015; Verma & Chandra, 2018). According to the researcher's knowledge, no study in the green hotel context has yet compared the predictive abilities of the original and updated TPB model, which further includes subjective descriptive norms. There is a significant discrepancy in the literature between injunctive norms (i.e., what significant referents think the individual should do) which were in the original model, and descriptive norms (i.e., what significant referents do) as these are different sources of motivation (Rivis & Sheeran, 2003). The researcher also believes this is the first study to employ TPB in regard to travellers' intentions to stay at green hotels.

Furthermore, the literature indicates that in spite of the overall efficacy of the TPB model, numerous researchers have made efforts to enhance the explanatory power of TPB by including other predictors in the TPB model (Chen & Tung, 2014; De Leeuw et al., 2015; Kaiser & Scheuthle, 2003). Some researchers have suggested that knowledge should be taken into account while investigating a person's inclination to engage in certain behaviours (Dumitrescu, Wagle, Dogaru, & Manolescu, 2011; Xiao, Tang, Serido, & Shim, 2011). While the significance of knowledge in explaining consumers' purchasing behaviours has been stressed in various contexts (DiPietro, Cao, & Partlow, 2013; Shin, Im, Jung, & Severt, 2018), only one study has integrated green hotel knowledge into the TPB model to predict travellers' intentions/behaviours (Chen & Peng, 2012). Additionally, travellers have pointed out that their lack of knowledge about the execution of green programmes in hotels hinders their decisions concerning green hotel accommodation (Chen & Peng, 2012; Nimri et al. 2017). As a result, this research postulates that green hotel knowledge will contribute to the basic TPB model in the green hotel setting. Moreover, although TPB can offer a platform to gauge intervention strategies that will affect intention and behaviour (Ajzen, 2017), there has been a lack of interventions in the TPB studies. Subsequently, this current research extends the TPB model developed and revised by Fishbein and Ajzen (2010) to initiate a framework that would assist in the verification of the decision-making of green travellers (see Figure 1.1). Consequently, this research utilises an intervention to examine its effect on the extended TPB model regarding purchasing green hotel accommodation. The intervention uses a persuasive communication strategy employing positive and negative message framing using

pictorial elements, randomly assign an intervention to two different groups of participants and no intervention to the third group of participants.



** The research randomly assigned an intervention to two groups of participants and no intervention to the third group of participants.*

Figure 1.1 Proposed TPB model (adapted from Fishbein & Ajzen, 2010, p.22).

1.3 Research Questions

This study aims to investigate the role beliefs play in the relationship between attitudes, social norms and perceived behavioural control and intention of Australian travellers' behaviour in choosing a green hotel in which to stay. The study also proposes to examine how knowledge of green hotels' practices may affect Australian travellers' intentions to stay at green hotels, and how the introduction of interventions may shape their intentions. The following research questions are outlined to guide the study's investigation:

Research Question 1: What are the reported behavioural, normative and control beliefs and additional constructs that underpin travellers' intentions to stay at a green hotel?

Research Question 2: Do travellers' behavioural beliefs have an impact on their attitude to stay at a green hotel?

Research Question 3: Do travellers' injunctive normative beliefs have an impact on their subjective injunctive norms to stay at a green hotel?

Research Question 4: Do travellers' descriptive normative beliefs have an impact on their subjective descriptive norms to stay at a green hotel?

Research Question 5: Do travellers' control beliefs have an impact on their perceptions of behavioural control to stay at a green hotel?

Research Question 6: Do travellers' attitudes have an impact on their intentions to stay at a green hotel?

Research Question 7: Do travellers' subjective injunctive norms have an impact on their intentions to stay at a green hotel?

Research Question 8: Do travellers' subjective descriptive norms have an impact on their intentions to stay at a green hotel?

Research Question 9: Do travellers' perceptions of behavioural control have an impact on their intentions to stay at a green hotel?

Research Question 10: Does travellers' green knowledge have an impact on their intentions to stay at a green hotel?

Research Question 11: Does employing the intervention of positive and negative message framing affect the relationships between the suggested antecedent variables and travellers' intentions to stay at a green hotel?

In the context of this study, a qualitative research method using an elicitation study was most suitable in order to identify beliefs and additional constructs to build the survey instrument and answer Research Question 1. Quantitative data methods were most suitable for answering Research Questions 2 to 10. These questions inquired about the relationships among the indirect and direct constructs of TPB and the additional construct of Green Hotel Knowledge. Following a review of relevant theoretical and research literature, the research questions were used to lead in to the statement of nine hypotheses to answer these questions. Further, quantitative data were used to answer Question 11 of this study relating to using the intervention of positively and negatively-framed messages.

1.4 Significance of the Research

A developing stream of research in green hotels has started to examine travellers' behaviour (Chen & Tung, 2014; Han, 2015; Han & Yoon, 2015a; Verma & Chandra, 2018). The current study presents a paradigm for understanding the behavioural intentions of travellers in the hospitality research and main alignments in the hotel sector. This study applies TPB to examine the key determinants leading to travellers' intentions to stay at a green hotel by extending the model and testing the impact of targeted communication messages to attempt to change behavioural intentions.

The results and findings of this study positively impact and contribute to theoretical and practical aspects. This study contributes to a better understanding of how to best predict consumers' green behaviour by an improved understanding of consumers' green hotel choice and to extending the TPB literature within the context of green accommodation. At present, consumer research on green hotel management is still viewed as an emerging academic subject. To a certain extent, the green practices in various hotels have failed to reflect the consumer demand. Therefore, this study is conducted from the travellers' perspective, hoping that hoteliers can identify factors affecting travellers' decision to choose to stay at green hotels.

1.4.1 Theoretical contributions

There are six key contributions of this research to the theory regarding green hotels. First, it is evident that the literature seems to be lacking the utilisation of a theoretical lens to examine the formation of travellers' behaviour towards staying at green hotels (Kim et al., 2017; Myung et al., 2012). TPB has been used to a great extent in numerous settings. Conversely, the TPB model has not been fully studied in the explicit domain of green hotel accommodation (Chang, Tsai, & Yeh, 2014; Chen & Tung, 2014). According to Ajzen (2017), the TPB framework can, and should, be employed in different settings, which will augment and improve TPB through its use to further study areas. In particular, this research provides a valued contribution to the present understanding of Australian travellers' behavioural intentions towards purchasing green hotel accommodation.

Secondly, while some studies use TPB to predict travellers' intentions to stay at green hotels, they do not always start with eliciting salient beliefs. Ajzen (1991) proposes this initial focus is necessary to understand any particular behaviour further. Hence, the current study concentrates on a significant gap in the existing literature through eliciting Australian travellers' beliefs regarding staying at green hotels. This elicitation study allows an in-depth investigation of Australian travellers' beliefs that impact their intentions to stay at a green hotel. Further, this study identifies green hotel knowledge as an additional construct affecting Australian travellers' beliefs regarding staying at such hotels.

Thirdly, this study uses the updated TPB model, which divides social norms into injunctive and descriptive norms. These two conceptualisations of social norms refer to the suggested appropriate and most common action in a certain situation (Han & Hwang, 2016). The results of this study provide empirical evidence concerning the impact of these two constructs on travellers' intentions to stay at green hotels.

Fourthly, Ajzen (2017) also argues that the TPB model could be extended by adding further constructs to improve the model's predictive power. Currently, there has been a developing focus on the role of knowledge in relation to consumer behaviour (Babakhani et al., 2017; Gao et al., 2016; Miao & Wei, 2013). Green hotel knowledge is included in the model to ascertain if this construct explains additional variance once the original constructs of the theory are taken into consideration. The results of this study can assist with the development of a better understanding of travellers' knowledge about green hotels' practices and if it impacts their intentions to stay at such hotels.

Fifthly, the study evaluates the role of the TPB constructs in the perspective of this study. The results of this study can assist in understanding the impact of these constructs on travellers' intentions towards staying at green accommodation.

Finally, to the best of the researcher's knowledge, studies that have previously utilised TPB in the green hotels setting do not introduce any intervention. This study employs a planned intervention to test its impact on the TPB model in the

green hotel context. Developing interventions can help answer questions related to behavioural change, and contribute to the evidence-based progress of the studied field (Luca & Suggs, 2013). This current study tests Ajzen's (2017) proposition that interventions can produce a change in intentions by addressing all the constructs of the theory including salient beliefs. The results of the study can assist with the development of a better understanding of message framing that impact travellers' behaviour.

1.4.2 Practical contributions

There are six practical contributions of this research to green hotel operations' praxis. First, this study focuses on travellers' perspectives in the green hotel context as research in this area is still in the early stages (Verma & Chandra, 2018). Hotel managers interested in adopting a pro-environmental strategy, are now able to understand that the intentions of travellers to select a green over a traditional hotel is a planned behaviour. Consequently, hotel managers need to build their communication strategy to increase individuals' most salient beliefs to persuade and encourage travellers to stay at green hotels.

Second, this study adds understanding of the importance of green hotel knowledge and its impact on travellers' choices. Hotel managers may convey marketing messages that clarify the objectives of the hotels' environmental programmes to travellers. This may help influence travellers' intentions to stay at green hotels.

Third, the results of this research demonstrates on how to educate travellers regarding the green programmes implemented by hotels. Though travellers might hold positive perceptions of green hotels, they might also be concerned about compromising different aspects of their experience when staying in such hotels. Subsequently, it is vital for hotel managers to deliver marketing messages that clarify the aims of their green programmes to enable travellers to comprehend the notions behind implementing such programmes and to shape the reputation and business profile of green hotels.

Fourth, this study examines the influence of the direct constructs of the TPB model on intentions to stay at green hotels. Based on the findings of the current research, hotel managers can build their promotional campaigns according to the robust effect of these constructs on travellers' intentions. This makes a strong case for establishing interventions, through advertising or public education, based on the most prominent constructs in order to target travellers by maximising exposure and disseminating information.

Fifth, this research demonstrates how positive and negative framing impacts the associations between the suggested determinant constructs and intentions to stay at a green hotel. Critical insights gained from employing such interventions offer recommendations on how new messages could be employed to increase travellers' intentions to stay at green hotels in a number of ways.

Finally, research into the consumer aspect of the green hotel context attempt to explain travellers' intentions and associate them with demographic characteristics (Han, Hsu, Lee, & Sheu, 2011; Ponnapureddy et al., 2017). By examining the relationships between travellers' socio-demographic characteristics and their intentions to stay at green hotels, hotel marketers develop more relevant campaigns to these travellers.

1.5 Research Methodology

Since this research relates to the application of TPB, a sequential transformative design was followed. The study was conducted in two phases where a qualitative study was employed in the preliminary phase followed by a quantitative study.

In phase one, a qualitative exploratory approach using an elicitation study was employed to obtain a new set of belief items related to travellers' behaviour in the green hotel context. Another aim of this study was to identify essential constructs in travellers' intention formation. According to Ajzen (2011) and Fishbein and Ajzen (2010), such studies are necessary to construct an adequate questionnaire for a particular behaviour and target population. The researcher followed Tracy (2013), and Krueger and Casey's (2010) recommended guidelines for qualitative research involving data collection, data analysis, and quality judgement. The

qualitative approach included three focus group sessions and empirical material from open-ended questionnaires. Active Australian travellers, who are 18 years and above, were requested to participate in these sessions. A content analysis of the responses of the focus groups was performed using Nvivo 10 software. The results of the elicitation study contributed to generating items for behavioural beliefs, salient referents, and control beliefs, which were used to develop the survey instrument for the quantitative study. It also assisted in identifying additional factors affecting travellers' intention to stay at green hotels. Further, an online pilot study was conducted to refine the research instrument and to ensure the effectiveness of the survey questionnaire. This pilot study was distributed by email to graduate students, academics and researchers at the researcher's university.

In phase two, an online survey was distributed to collect the data. This study intended to identify the major factors that influence Australians' decisions to stay at green hotels. The survey was electronically distributed via Qualtrics™ to a sample of Australian travellers intending to stay in a hotel in the near future. The study also incorporated an intervention using images into the survey instrument. These images were not only advertisements; rather a research device used to examine participants' responses during the research process. Two positive images related to the green hotel's annual reduction in resource usage and two negative images related to pollution occurring in Australia were incorporated into the online survey. Consequently, the participants were divided into three groups in the online survey. The first control group received only the survey. The second group received the survey with positive images, and the third group received the survey with negative images. A total of 771 usable responses were received from participants. The quantitative data were tested using structural equation modelling, multi-group analysis, and ANOVA with the help of AMOS and SPSS version 22. Figure 1.2 presents the research methodology for the two phases.

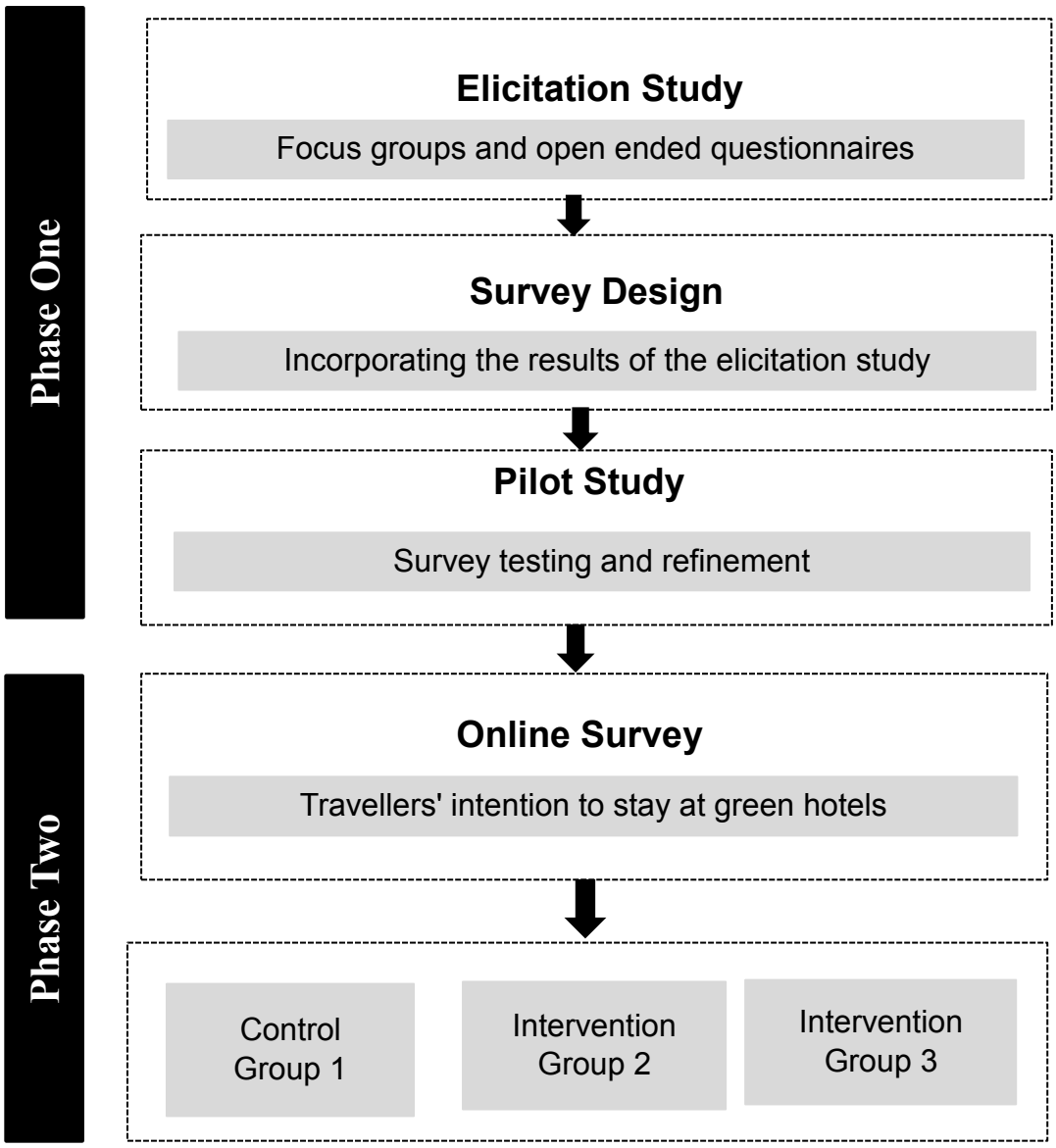


Figure 1.2 Research methodology

1.6 Organisation of the Study

This thesis is presented in five chapters. Chapter 1 overviews the background of the study and the theoretical perspectives, specifying the problem statement and explaining the significance of the research. Chapter 2 reviews extant literature related to environmental sustainability in tourism research and green hotels specifically. This chapter also closely examines the TPB framework and the use of interventions. The research framework and hypotheses propositions are presented at the end of this chapter. Chapter 3 presents the methodology followed, along with the research design, research phases, and data collection methods. Chapter 3 also presents the measurement variables applied in this study, followed by a presentation of the statistical analyses used. Chapter 4

reveals the elicitation study findings and tests the proposed hypotheses using statistical methods, including confirmatory factor analysis, structural equation modelling, and multi-group analysis. Chapter 5 discusses the results and presents the theoretical and practical implications, limitations associated with this study, and future research directions.

1.7 Definitions and Terms

The previous section introduced the organisation of the current study. In order to alleviate any confusion, this section will present the terms used (often interchangeably) when it comes to being green including 'sustainable', 'environmental', 'environmentally friendly', 'environmentally responsible' 'environmentally conscious', 'eco-friendly', among others. These terms refer to activities supporting less degradation of the environment (Han, et al., 2015; Yadav et al., 2018).

The Green Hotels Association (2018) defines green hotels as "environmentally friendly properties whose managers are eager to institute programs that save water, save energy, and reduce solid waste—while saving money—to help protect our one and only earth" (para. 8). Consequently, such hotels persistently implement environmental management including the procedures, practices, and programs that a lodging property initiates with the aim of reducing and eliminating negative damaging environmental impacts that result from its operations (Rahman & Reynolds, 2016). According to Han et al. (2010), green hotels are lodging establishments that have implemented at least one environmentally sound practice such as saving water, saving energy, or reducing solid waste. In addition, Yadav et al. (2018) define 'green hotels' as properties that invest substantial resources in green practices aiming to minimise energy and water consumption and reduce waste.

General terms, which have an explicit meaning within the context of this thesis, are defined in Table 1.1. Further definitions of specific constructs that have been investigated in this thesis are provided in the relevant section of the literature review in Chapter 2.

Table 1.1

Definition of Terms

Term	Explanation
Green Hotels	Environmentally-friendly properties whose management is eager to institute programs that save water, save energy, and reduce solid waste - while saving money - to help protect earth.
Behavioural Beliefs	Perceived outcomes of performing a certain behaviour.
Injunctive Normative Beliefs	The perceptions that significant referent individuals or groups support or do not support conducting a specific behaviour.
Descriptive Normative Beliefs	The perceived behaviours of important referent individuals or groups.
Control Beliefs	The existence or deficiency of essential opportunities and resources that assist or hinder conducting a specific behaviour.
Attitude	A person's overall evaluation of the specific behaviour.
Subjective Injunctive Norms	Perceptions of what is supported and not supported by influential individuals.
Subjective Descriptive Norms	Perceptions of what is frequently conducted by influential individuals.
Perceived Behavioural Control	Perception of the potential difficulties and obstacles involved in conducting a certain behaviour.
Green Hotel Knowledge	Knowledge related to facts, perceptions and relationships concerning the impact of hotels on the environment.
Behavioural Intention	An individual's readiness/willingness to engage in a particular behaviour.
Intervention	A method designed to produce changes in individuals' intention and behaviour.

1.8 Chapter Summary

This chapter has presented a foundation and framework for the thesis. Firstly, a background to the research problem has been provided in the context of the growing environmental problems in the tourism and hospitality industry. The relevance of these issues to consumer behaviour in the green hotel context was argued, indicating that research in this area is still in the early stages. The overall aim of this research was presented based on the TPB theoretical framework to investigate the underlying factors leading to travellers' intentions to select a green hotel. The significance of this research has been argued in terms of its contribution to the existing body of knowledge as well as industry practice. The general research methodology was briefly presented by justifying the research phases. Finally, the study structure was outlined presenting an overview of the function of each chapter of this thesis.

The following chapter provides a review of the current literature related to sustainability in general and its impact on travellers' behaviour in green hotels. It also informs the theoretical perspective of the study and concludes by presenting the research framework and hypotheses.

CHAPTER 2

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENET

2.1 Chapter Introduction

This chapter presents a review of literature related to sustainability and aspects of sustainable tourism in particular. This literature forms the foundation for knowledge of green hotels and the growing consumer demand for such lodgings. How our knowledge of green hotels can be expanded through the application of the tested Theory of Planned Behaviour (TPB) and expansion of this theory through incorporating the construct of interest “green hotel knowledge” is then explained. A review of studies that employed TPB in the green hotel context discussing key relationships is offered, followed by the role of interventions in influencing travellers’ pro-environmental behaviour. Finally, the research framework and hypotheses are presented.

2.2 Sustainability in the Tourism and Hospitality Industry

Critical issues arising from human interaction with nature have created an awareness that most environmental damage is caused by the human obsession with increasing productivity and consumerism (Chang et al., 2014; Magdoff & Williams, 2017). Furthermore, concerns related to climate change, loss of biodiversity, growing populations, poverty and social inequality have led to deviations in people's insights of social behaviour and the environment (Kakoty, 2018; Klockner, 2013). Whilst there is some evidence that consumers are beginning to act responsibly towards the environment (Verma & Chandra, 2018), the impact, thus far, appears insignificant, as business profits remain the dominant controller and director of the world's resources (Epstein & Buhovac, 2018).

In the late 1970s, the World Tourism Organisation asserted the importance of preserving the environment for tourism and formed an Environmental Committee

to consider the situation (Bohdanowicz, 2006; Kasim, 2007). The term ‘sustainability’ was first utilised in 1987 in the United Nations’ Brundtland Report (Sloan, Legrand, Tooman, & Fendt, 2009). Since the release of this report, sustainability has become a ‘buzzword’, and a necessity influencing every arena of human behaviour (Higgins-Desbiolles, Moskwa, & Wijesinghe, 2017). This thesis adopts the definition of sustainability as “meeting the needs and aspirations of the present generation without compromising the ability of future generations to meet their needs” (Brundtland, 1987, p. 292).

The sustainability concept calls for fundamental change in all human actions to ensure that densities on the earth do not threaten future living criterions (Higgins-Desbiolles et al., 2017). The literature has identified sustainability as a ‘triple bottom line’ which relates to achieving profitability, social equity, and environmental preservation in order to reach sustainability (Elkington, 1997). Firms may derive several benefits from incorporating the triple bottom line concept in their business model, for instance: improving productivity and maximising profit, developing relationships with stakeholders, improving their market position, and expanding the strategic decision-making process within the firm (Cvelbar & Dwyer, 2013; Darcy, Cameron, & Pegg, 2010).

Environmental sustainability has been increasingly receiving attention on business agendas internationally (Hsieh, 2012). Furthermore, a majority of the research findings focusing on sustainability have primarily examined it with an explicit emphasis on the firms’ environmental impressions (Boley & Uysal, 2014; Cvelbar & Dwyer, 2013; Han & Hwang, 2016; Teng et al., 2018; Yadav et al., 2018). The notion of corporate environmental awareness and sustainable development has escalated in the business arena due to the seriousness of global warming, the increase in legislation, and market pressures (Chan, Prendergast, & Ng, 2016), and the tourism industry is no exception. The 1992 Rio Earth Summit acknowledged tourism as one of the important sectors for sustainable development, and subsequently, environmental movements within the tourism sector started to progress (Hales & Larkin, 2018).

Mowforth and Munt (2015) posit that the tourism industry has a significant impact on the consumption of natural resources. It has been acknowledged that this

industry is one of the main contributors to greenhouse gas emissions and, specifically, to carbon dioxide (CO2) emissions (Luo, Becken, & Zhong, 2018; McKercher, Prideaux, Cheung, & Law, 2010). Carbon emissions from tourism are estimated to reach 728 million tonnes by 2035, an increase of 130 per cent predicted between the years 2005 and 2035 (Prideaux et al., 2015; UNWTO, 2009). Additionally, the tourism industry's consumption of key resources – energy, water, land, and materials – is increasing, along with the generation of solid waste, sewage, and loss of biodiversity (UNEP, 2017). Tourism is projected to generate an increase of 154 per cent in energy consumption, 152 per cent in water consumption and 251 per cent in solid waste disposal by 2050 (UNEP, 2017). As such, environmental sustainability must now guide tourism development in the 21st century through implementing sound environmental practices, which will help protect and conserve natural heritage and sustain biodiversity (UNWTO, 2017).

The hospitality industry plays a significant role in the tourism industry, and there is increasing importance being placed on environmental protection initiatives (Erdogan & Baris, 2007; Hsieh, 2012). The hospitality industry leaves a major ecological footprint as it is a resource-exhaustive business (Legrand, Sloan, & Chen, 2017). Around 75 per cent of all adverse environmental effects attributed to hotel operations results from the consumption of natural resources (water and energy), followed by emissions released to water, air, and soil (Aboelmaged, 2018; Bohdanowicz, 2006). The consumption of these resources will directly cause depletion of the very resources that the hotel sector relies upon (Han & Hwang, 2016). Further, measurement of the impact of hotel operations on the environment reveals that a hotel guest consumes more than 300 litres of water, generates one kilogram of waste, and emits more than 20 kilograms of carbon dioxide every day (Bohdanowicz, Zientara, & Novotna, 2011; Slath & Nikhanj, 2016; Tang & Lam, 2017), which is alarming.

Initially, the concept of greening hotels' operations was not easily grasped by many hoteliers. Six key reasons for this have been proposed: 1) high start-up or investment costs (Baker et al., 2014; McLennan et al., 2016); 2) lack of internal expertise (McLennan et al., 2016); 3) lack of knowledge (Graci & Dodds, 2008); 4) complexity of running green programmes (Graci & Dodds, 2008; McLennan et

al., 2016); 5) implementing such practices might be perceived by travellers as a sacrifice of luxury and comfort (Baker et al., 2014; Kang et al., 2012), as this sector is established on perceptions of luxury, indulgence and grandeur (Line & Hanks, 2016); and, 6) lagging consumer demand for green hotel accommodation as there must be sufficient demand in the marketplace in order to supply environmental products and services in the hotel sector (Baker et al., 2014; Kang et al., 2012; Line & Hanks, 2016). Nevertheless, since hotels operate around the clock and consume a substantial amount of energy, water, and resources, hotel managers are becoming concerned about their hotels' environmental performance (Chan, Hon, Chan, & Okumus, 2014; Hsieh, 2012).

The current hospitality literature confirms the importance of committing to green practices within the hotel sector (Myung et al., 2012; Verma & Chandra, 2018). The majority of literature in this area focuses either on the negative environmental impacts and potential outcomes for reducing operational costs (Bohdanowicz, 2006; Boley & Uysal, 2014; Graci & Dodds, 2008), or marketing issues related to travellers' environmental awareness (Font & McCabe, 2017; Gao et al., 2016; Han, 2015; Kuminoff, Zhang, & Rudi, 2010). Whilst initially 'green initiatives' were viewed as a mere marketing tool, they are, today, considered a major factor in greenhouse gas reduction that should be incorporated into daily operations (The Green Hotelier, 2015; Verma & Chandra, 2018). Further, environmental sustainability can be viewed as a critical aspect in travellers' hotel selection processes (Berezan, Raab, Yoo, & Love, 2013). According to Deloitte (2015), around 95 per cent of business travellers confirm that the hospitality industry has to take stronger actions to encompass green practices.

2.2.1 Green hotel emergence

Hotels, directly and indirectly, impact the environment through high usage of natural resources, energy, and water (Han et al., 2011; Teng et al., 2018; Yeh, Ma & Huan, 2016). To overcome such negative impact, greening the operations of hotels has become a necessity leading to the emergence of green hotels. The hospitality industry defines 'green hotels' as lodging properties that are committed to several pro-environmental practices, such as saving energy, reducing water usage, and reducing waste (Manaktola & Jauhari, 2007). Likewise, Rahman and

Reynolds (2016) define green hotels as lodging properties that operate in a way that protects natural resources, reduces waste, and recycles materials. Besides, according to the Green Hotels Association website (2018, para 8), green hotels are “environmentally-friendly properties whose managers are eager to institute programs that save water, save energy, and reduce solid waste - while saving money - to help protect our one and only earth”. The common factor between these definitions is that such hotels contribute to environmental protection by efficiently consuming their resources such as energy, water, and materials, therefore, demonstrating environmental stewardship. Specifically, unlike conventional hotels, green hotel establishments actively follow pro-environmental standards and implement environmental management; committing themselves to carrying out environmental improvements, demonstrating such commitment through green labels or green certifications and acquiring techniques related to best practices in environmental management with experts’ assistance (Han e al., 2011). It is generally agreed that becoming a green property not only meets the demands of environmentally responsible consumers and adopts the responsibility of engaging in environmental obligations, but also results in significant cost saving through various environmental benefits as energy/water conservation, waste reduction, recycling and product-life extension among others (Han et al., 2011; Manaktola & Jauhari, 2007).

Hotels may adopt green practices for a number of reasons, including productivity and corporate performance improvement, cost reduction, and profit maximisation (McLennan et al., 2016; Legrand et al., 2017), compliance with government policy and regulation (Dief & Font, 2010; Legrand et al., 2017), competitive advantage and reputation enhancement (Graci & Dodds, 2008; Han & Yoon, 2015b), in addition to increased stakeholder pressure (Barber & Deale, 2014; Chou & Chen, 2014). While some of these motivators are intrinsic such as reducing cost and increasing profits, others are extrinsic in nature as the laws and regulations and creating brand awareness, and a combination of the two will help hotels move towards a more sustainable future.

Adopting green practices has recently become mainstream in the hotel sector as it reflects environmental responsibility and reduces costs (Yeh et al., 2016; Zhang, Joglekar, & Verma, 2012). However, some practitioners have shown

resistance, perceiving it as affecting their effectiveness or viability (Yeh et al., 2016). Despite these views, green hotels are considered to be an emerging niche in the accommodation market (Han & Yoon, 2015b). Research shows that chain hotels, worldwide, such as Marriott, Hilton, Fairmont, and Starwood among others, are implementing environmental practices including recycling programmes, purchasing local products, and following certification standards (Butler, 2008; Kang et al., 2012; Wang, Krishna, & McFerran, 2017; Yi, Li, & Jai, 2018).

2.2.2 Green hotel practices

Due to rising green consumerism and government regulations, pressure has been increasing on hotels to implement environmentally sound practices (Legrand et al., 2017). In the hotel sector, green practices are aimed at "minimising the impact on the environment by applying environmentally preferred practices to reduce waste and to use sustainable resources and supplies" (Myung et al., 2012, p. 1264). Such programmes include the creation and implementation of environmental policies and programmes leading to pollution prevention, waste minimisation, climate change mitigation, environmental health risk minimisation, cost savings, market positioning and improvement in the well-being of host communities (Lee, Han, & Willson, 2011; Mensah, 2014). For instance, operators of green hotels actively invest in environmentally friendly programs, organic foods, equipment, and processes in order to create healthier environments to their guests and better workspaces to their employees (Han, 2015).

Consequently, several industry associations and programmes have been established such as ISO 14001 Environmental Management, Green Globe 21 for global environmental standards, EarthCheck assessment tools for hotels, and the expansion of the Green Hotels Association (GHA) (Chan et al., 2018; Chen & Peng, 2012; Han et al., 2011; Lee & Cheng, 2018; Mensah, 2014; Myung et al., 2012; Zeppel & Beaumont, 2014). These sustainability associations support and guide hotels on how to implement more environmentally responsible policies, training their employees on green practice procedures, and also by undertaking audits to verify sustainability targets (Higgins-Desbiolles et al., 2017; Mensah, 2014).

Cost reduction has been viewed as a chief motivator for hotels to switch to green praxis (Graci & Dodds, 2008; Lee, Sun, Wu, & Xiao, 2018; Legrand et al., 2017). Going green can cut hotels' rate of energy use and water usage, which will increase hotels' long-term profitability by reducing daily operating costs in the long-term (Barber & Deale, 2014; Chou & Chen 2014; Han & Yoon, 2015a; Kuminoff et al., 2010; Legrand et al., 2017). For instance, by implementing green programmes, resource consumption can be reduced between 20-40 per cent without dropping the operational quality and guests' comfort (Graci & Dodds, 2008). Butler (2008) also reports that the financial benefits of green design in a Leadership in Energy and Environmental Design (LEED) building are approximately US$50 to US$70 per square foot. Besides, hotels may save a substantial amount of money by executing recycling programmes (Singh, Cranage, & Lee, 2014). These financial savings are essential for hotels operating in a highly competitive market. Bohdanowicz et al. (2011) believe that the number of green hotels will increase dramatically, specifically because of the financial benefits alone.

Other than reducing operating costs, Chan and Wong (2006) suggest that government regulations play a vital role in motivating hotels to become green. Becken and Hay (2012) further argue that it would be an obstacle for hotels to react to climate change without such procedures and incentives in place. Governments in some countries such as Singapore, Austria and UAE have reinforced laws and have enacted a variety of subsidies to encourage hotels to become sustainable (Chan & Wong, 2006). These incentive schemes are viewed as an essential component in hotel business environmental decision-making (Mair & Jago, 2010). Some of these incentives include tax reductions, financial grants, insurance discounts and accelerated regulatory permits (Dodds & Holmes, 2011; Mair & Jago, 2010).

Green practices also focus on developing marketing strategies that accurately reflect the hotels' environmental commitment (Chen & Peng, 2012; Gao et al., 2016; Teng et al., 2018). Green marketing can be used by hotels as a means to position themselves, differentiate their products and services, and improve relationships with their stakeholders (Dief & Font, 2010; Rahman & Reynolds, 2016). Several scholars have indicated that by becoming green, hotels can gain

a competitive advantage and enhance the positive image of the hotel (Graci & Dodds, 2008; Han & Yoon, 2015a; Yu, Li, & Jai, 2017).

2.2.3 Consumer demand

In the growing pro-environmentally aware marketplace, consumers have started to recognise the damaging impact of their purchasing decisions on the environment (Teng, Wu, & Liu, 2015). Building on this awareness, researchers suggest that environmentally conscious consumers may be more likely to act in an environmentally responsible manner in comparison to other consumers (Baker et al., 2014; Lee & Moscardo, 2005). So far, however, research has proposed a discrepancy between consumers' articulated environmental attitudes and their behaviour (Casaló & Escario, 2018; Hartmann, Apaolaza, & D'Souza, 2018).

This conflict has been mirrored in the hospitality industry as prior studies show conflicting findings regarding travellers' willingness to stay at green hotels and getting involved in environmental programmes (Baker et al., 2014; Cvelbar, Grün, & Dolnicar, 2017; Kang et al., 2012). Jiang and Kim (2015) further claim that more hotels would become pro-environmental if there was to be a steady and substantial consumer demand. However, hoteliers argue that travellers remain unresponsive to going green (Stafford & Hartman, 2013). Additionally, several hotel managers have voiced their hesitance to implement pro-environmental programmes due to their concern that travellers will regard such programmes as a standard degrade or cost-cutting measure (Baker et al., 2014). Whereas, some travellers may essentially give priority to luxury and comfort, ahead of environmental issues in their purchasing decisions, and they might be unwilling to give up some convenience (Baker et al., 2014; Kang et al., 2012; Nimri et al., 2017). As such, other travellers might have expectations of minimum standards of service provision which might be affected by green programmes, specifically in luxury hotels (Line & Hanks, 2016). Also, a number of travellers are averse to environmentally-friendly room amenities like linen and towel re-use programmes, large soap dispensers, energy efficient air conditioning, and using recycled paper (Baker et al., 2014; Kasim, 2004; Line & Hanks, 2016).

Perceived cost may be another issue affecting consumer action. Several hotel managers presume that their guests will not pay extra for green programmes (Tang & Lam, 2017). Travellers may be showing intentions to engage in pro-environmental behaviours; nevertheless, they may act in a different manner when it comes to paying a premium (Myung, 2016). Also, a number of travellers might be reluctant to stay at a green hotel due to some perceptions that green hotels charge premium prices (Kang et al., 2012). Another primary reason might be that most travellers are unclear about the characteristics and execution of environmental programmes in green hotels, which may impede their decision regarding staying at such hotels (Chen & Peng, 2012; Nimri et al., 2017). In the green restaurant context, Jang, Kim, and Bonn (2011) identify a lack of knowledge amongst consumers about green restaurant praxis. According to Ponnapureddy et al. (2017) not all travellers are disposed to pro-environmental consumerism, as they hold diverse views of green hotel knoweldge.

Through the previous studies, it is confirmed that travellers' demand for green hotels is rather low, although a number of travellers now search for hotels that implement green programmes (Rahman & Reynolds, 2016). Major hotel brands have also incorporated some level of the environmental sustainability platform into their daily operations (Wang et al., 2017; Yi et al., 2018) and this increasing application of green practices caters to a growing segment of more environmentally-active consumers (Barber & Deale, 2014). Certain scholars even argue that due to this current increase in green consumerism, travellers expect lodging properties to be pro-environmental. Consequently, if a hotel does not implement green programmes, it might lose its guests to greener competitors (Butler, 2008; Rahman & Reynolds, 2016).

According to a recent report by Booking.com (2018), 87 per cent of travellers indicated their intentions to travel sustainably, with nearly four out of ten confirming that they often or always act accordingly. Specifically, 68 per cent of travellers stated that they intend to stay at a green hotel in 2018, rising from 65 per cent in 2017 and 62 per cent in 2016. Also, the results of an international survey conducted by Trip Advisor show that 79 per cent of travellers focus on hotels executing pro-environmental programmes (TripAdvisor, 2013). Also, Berezan, Millar, and Raab (2014) propose that such programmes are critical

determinants in travellers' choice for green accommodation. This is also confirmed by Kim and Han (2010) as they report that in the American travellers are willing to pay a premium price to stay at a green hotel. The Canadian hotel sector has also reported travellers' high environmental perceptions and preferences for hotels that adopt sound environmental practices (Graci & Dodds, 2008). Further, there is evidence of the positive influence of adopting green practices on consumer satisfaction and loyalty (Rahman & Reynolds, 2016; Smerecnik & Andersen, 2011).

The increasing consumer demand for green hotels has attracted the attention of several tourism and hospitality researchers (i.e., Kim et al., 2017; Kim, Yun, Lee, & Ko, 2016; Warren, Becken, & Coghlan, 2017). However, there is a dearth of research examining travellers' behaviour in relation to green hotels. In a comprehensive review of hospitality literature from 2000 to 2014, Kim et al. (2017) state that of the 146 articles identified, merely 25.3 per cent were consumer focused. Similarly, Myung et al. (2012) report that of the 52 studies found in the hospitality sector, only 28 per cent investigate consumer behaviour in the green hotel context. One way in which scholars can explore pro-environmental consumer behaviour is to use social psychological theories, and these are discussed in the next section.

2.3 Theoretical Background

A main gap in the hospitality environment-related literature is a dearth of studies that have solid theoretical underpinning (Myung et al., 2012; Rahman & Reynolds, 2016). As such, there is a need to incorporate theoretical views in this line of research to investigate pro-environmental consumer behaviour (Rahman & Reynolds, 2016). The inadequate number of studies that embrace a theoretical lens examine individuals' environmentally responsible behaviour by using: the value-belief-norm theory (Han, 2015); the theory of repurchase decision-making (Han & Yoon, 2015a); the model of goal-directed behaviour (Han & Yoon, 2015b); the theory of environmental commitment (Rahman & Reynolds, 2016); the model of responsible environmental behaviour (Chao, 2012); the theory of reasoned action (Han et al., 2010); and the theory of planned behaviour (TPB) (Han et al., 2010; Han & Kim, 2010; Verma & Chandra, 2018). TPB was identified as the

most tried and tested theory in the psychological environmental domain and that it was used by 39 per cent of the studies (Klockner, 2013).

TPB is an extended version of the theory of reasoned action (TRA) (Ajzen, 1991), which has been extensively accepted by scholars and researchers (Armitage & Conner, 2001). Specifically, it has been employed effectively in consumer behaviour research in different contexts (e.g., Armitage & Conner, 1999; Chang et al., 2014; Fishbein & Ajzen, 2010). The following section presents the details of the TPB and its major constructs.

2.3.1 Theory of Planned Behaviour

Predicting human behaviour in different contexts is a highly desirable but difficult task (Ajzen, 2017). Fishbein and Ajzen (1975) demonstrate that intentions are identified as the most significant determinant of whether an individual will engage in a specific behaviour. In initial investigations using the TRA framework, behavioural intentions were predicted by two constructs: attitude and subjective norms (Fishbein & Ajzen, 1975). In 1985, Ajzen argued that TRA contained limitations in predicting human behaviour, as intentions can be translated into actual behaviour only if the specific behaviour is under volitional control. Therefore, Ajzen (1985) suggests the inclusion of perceived behavioural control and modified the TRA framework into the TPB model.

TPB is a proven social cognition model that has been frequently used in a variety of disciplines (Gao et al., 2016; Han et al., 2010; Myung et al., 2012). This theory deals with the information processing of individuals and is considered the most prominent theory for predicting human behaviour (Connor, Armitage, & Conner, 2002). While the theory was cited only 22 times in 1985, the number of citations has progressively developed to 4,550 in 2010 (Ajzen, 2011) and 18,475 in 2012 and has been used as a keyword by 1,099 theses and 353 journal articles (Chang, 2013). Some authors have criticised the theory, claiming that TPB has a limited predictive validity and that reviews of the theory demonstrate a small amount of variance explained by the TPB constructs (Sniehotta, Presseau, & Araújo-Soares, 2014). However, the usefulness of the theory in forecasting intentions and behaviour has been supported by numerous meta-analytic

reviews, thus providing substantial evidence for the theory's effectiveness (e.g., Cooke, Dahdah, Norman, & French, 2016; Scalco, Noventa, Sartori, & Ceschi, 2017).

According to a recent study by Chan et al. (2016), TPB has been employed due to its robustness in areas such as health behaviours (Conner & Sparks, 2005; Malek, Umberger, Makrides, & ShaoJia, 2017); alcohol consumption (Hasking & Schofield, 2015; Haydon, Obst, & Lewis, 2018); smoking (Record, 2017); speeding (Atombo, Zhang, & Wemegah, 2017), exercise domains (Gucciardi & Jackson, 2015; Lois, Moriano, & Rondinella, 2015; Stolte, Hopman-Rock, Aartsen, Van Tilburg, & Chorus, 2017); financial donations (Kashif & De Run, 2015); job searches (Evers & Sieverding, 2015; Fort, Pacaud, & Gilles, 2014); gambling behaviours (Flack, & Morris, 2017; St-Pierre, Derevensky, Temcheff, Gupta, & Martin-Story, 2017); leisure participation (Goh, Ritchie, & Wang, 2017); holiday cycling (Kaplan et al., 2015); international travel (Hsu & Huang, 2012; Ye et al., 2017); ecotourism (Gstaettner, Rodger, & Lee, 2017; Lee & Moscardo, 2005); and destination choice (Lam & Hsu, 2006; Park et al., 2017).

In particular, TPB has been successfully applied in environmental-related domains of behaviour, such as recycling (Nigbur, Lyons, & Uzzell, 2010; Xu, Ling, Lu, & Shen, 2017); green consumer behaviour (Paul, Modi, & Patel, 2016; Suh, Eves, & Lumbers, 2015); energy saving (Chen, 2016; Halder, Pietarinen, Havu-Nuutinen, Pöllänen, & Pelkonen, 2016); green restaurant choice (Jang et al., 2015; Kim, Njite, & Hancer, 2013); and green hotel choice (Chen & Tung, 2014; Yadav et al., 2018).

TPB offers a clear-cut structure (Figure 2.1) that agrees a systematic examination of the formation of intentions and behaviour by concurrently considering volitional and non-volitional elements (Fishbein & Ajzen, 2010). Behaviour could be anticipated based on the individual's behavioural intention, so intention is the dominant factor of this theory. Further, control over the performance of the behaviour should be taken into account (Fishbein & Ajzen, 2010). According to TPB, intentions to perform behaviours can be predicted from attitudes, social norms, and perceived behavioural control, which are known as the direct constructs of the theory (Ajzen, 1991). These direct constructs controls are

associated with proper sets of salient behavioural, normative, and control beliefs about the behaviour, which are known as the indirect constructs of the theory (Ajzen, 1991). The following sections present the constructs of the theory; these will be followed by an explanation of the extension of TPB and, finally, the impact of interventions on the TPB model.

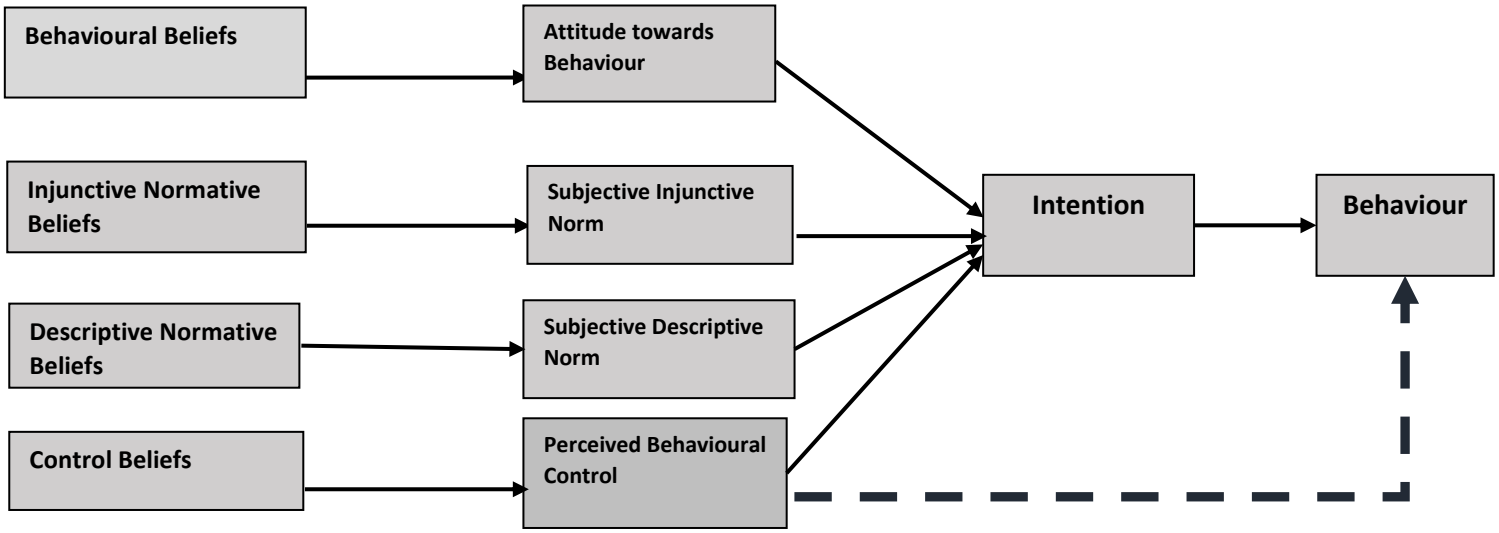


Figure 2.1 Theory of planned behaviour model (adapted from Fishbein & Ajzen, 2010, p.22).

2.3.1.1 Beliefs

Over the past five decades, research has been focusing on the nature of beliefs (Line & Hanks, 2016). In general, the belief concept entails holding particular facts about certain matters to be correct to the best of the individual's knowledge, irrespective of the extent of the underlying information (Fishbein & Ajzen, 2010; Line & Hanks, 2016). Conceptualised as such, the substance of a belief does not depend on the truth of that knowledge. As a result, beliefs provide a basis for successive behaviour. Specifically, TPB presumes that human behaviour is based on rational decision-making processes grounded in beliefs, which people have towards a certain behaviour (Fishbein & Ajzen, 2010).

TPB distinguishes between four kinds of salient beliefs; behavioural beliefs, normative injunctive and descriptive beliefs, and control beliefs known as the indirect constructs of the theory (Fishbein & Ajzen, 2010). Behavioural beliefs constitute the underlying determinants of attitudes towards the behaviour,

injunctive and descriptive normative beliefs are assumed to influence social norms, and control beliefs provide the foundation for perceived behavioural control (Ajzen, 1991).

As more consumers have begun to comprehend that their purchasing behaviour influences the environment, it is necessary to explore the actions explicitly connected to consumers' beliefs (Fornara, Pattitoni, Mura, & Strazzera, 2016). The effect of beliefs on specific behaviour is crucial, and several studies have verified that changing an individual's beliefs can lead to an analogous modification in their behaviour, especially when it comes to choosing green hotel accommodation (Han & Kim, 2010; Line & Hanks, 2016). The following section explains the different types of beliefs in the TPB framework.

Behavioural Beliefs (Attitudinal Element)

Behavioural beliefs are the perceived outcomes of performing the behaviour (Fishbein & Ajzen, 2010). Individuals positively or negatively evaluate the attributes associated with the behaviour, leading directly to the formation of the attitudes (Ajzen, 1991). Although individuals may shape many behavioural beliefs, it is presumed that only readily accessible beliefs are viewed as the fundamental determining factors of an individual's attitude (Fishbein & Ajzen, 2010). The expectancy-value model lays the foundation for the conceptualisation of behavioural beliefs in the TPB framework (Ajzen, 1991; Fishbein & Ajzen, 1975). According to this model, behavioural beliefs are assumed to reflect a combination of the strength of these beliefs and one's evaluation of the outcome of that belief, consequently creating the behavioural belief-based measures. Ajzen (1991) elaborates that the behavioural belief-based measure should correlate with the attitude measure. Further, there is overall support for the hypothesised relation between salient behavioural beliefs and attitudes (Ajzen, 2017; Fishbein & Ajzen, 2010). According to Fishbein and Ajzen (2010), substantive knowledge about the considerations that motivate individuals to perform a certain behaviour could be obtained through eliciting beliefs. Behavioural beliefs generate a favourable or unfavourable attitude towards the behaviour as each belief has a significant influence (Ajzen, 1991). Thus, for

studies using the TPB model, it is worth examining the underlying behavioural beliefs.

Different studies have generally confirmed the hypothesised relationship between behavioural beliefs and attitudes (e.g., Ajzen, 1991; De Leeuw et al., 2015; Han et al., 2010; Kim & Han, 2010; Lam & Hsu, 2004). According to these studies, attitudes develop reasonably from individual beliefs about a certain behaviour. Such beliefs are shaped by linking them to a specific outcome produced by conducting the behaviour. Since outcomes are assessed positively or negatively, individuals consecutively obtain an attitude towards that certain behaviour.

Within the hospitality context, travellers' behaviour was found to be influenced by their beliefs regarding the condition of the environment and the harm linked to human actions (Han et al. 2010; Kang et al., 2012; Nimri et al., 2017). According to Kang et al. (2012), travellers who believe that human actions have damaged the environment, are more likely to stay at green hotels. Miao and Wei (2013) indicate that when travellers believe in the effectiveness of their behaviour, they are more likely to have a positive attitude and, therefore, intentions towards staying at green hotels. Further, when these travellers believe that staying at a green hotel will benefit them and/or the environment, they will be willing to pay a premium price (Han et al., 2010; Huang, Lin, Lai, & Lin, 2014).

While some travellers may believe that staying at a green hotel might protect the environment, the same travellers often choose not to stay at these hotels (Line & Hank, 2016). Their concerns may relate to 'greenwashing' when hotels are not as green as they claim. Pizam (2009) states that some hotels hang green signs and misuse them as a marketing ploy. Travellers' concerns may also relate to compromising on luxury and comfort levels (Baker et al., 2014; Nimri et al., 2017). As such, perceptions may compromise the positive beliefs travellers hold regarding green hotel accommodation.

Injunctive Normative Beliefs (Subjective Injunctive Norm Element)

Injunctive normative beliefs relate to the perceptions that significant referent individuals or groups support or do not support conducting a specific behaviour

(Ajzen 1991, 2017; Cialdini, Reno, & Kallgren, 1990; Fishbein & Ajzen, 2010). These referent others are people close or imperative to an individual and impact their decisions (e.g., relatives, friends, or colleagues) (Ajzen, 2017). Injunctive normative beliefs establish the fundamental elements of subjective injunctive norms (Ajzen, 1991). According to the expectancy-value model, injunctive normative beliefs are assumed to reflect a combination of the likelihood that significant referents support or do not support engaging in a given behaviour and the person's motivation to comply with those important others (Ajzen, 1991). Further, the injunctive normative belief-based measure should correlate with the measure of subjective injunctive norms (Ajzen, 1991). The relationship between those two constructs has been examined, and there is general support for the hypothesised associations between injunctive normative beliefs and subjective injunctive norms (Ajzen, 2017; Fishbein & Ajzen, 2010).

In the green hotel setting, studies have reported a positive influence of normative beliefs on subjective norms towards staying at green hotel accommodation (e.g., Han et al., 2010; Han & Kim, 2010; Kim & Han, 2010). These studies reporte immediate family, relatives, friends, colleagues, and employers as significant others. When these important referents regard staying at a green hotel as an appropriate action, the perceived social weight to stay at a green hotel would upsurge the motivation to comply with this behaviour.

Descriptive Normative Beliefs (Subjective Descriptive Norm Element)

Descriptive normative beliefs concern the perceived behaviours of important referent individuals or groups (Fishbein & Ajzen, 2010). These beliefs are based on the observed or inferred actions of those significant referents (Ajzen, 2017). Perceptions of strong descriptive normative beliefs produce subjective descriptive norms (Fishbein & Ajzen, 2010). According to the expectancy-value model, descriptive normative beliefs are assumed to reflect a combination of the likelihood that important referents would conduct a certain behaviour and the person's identification with the referent in question (Fischbein & Ajzen, 2010). Further, Fishbein and Ajzen (2010) elaborate that the descriptive normative belief-based measure should correlate with the measure of subjective descriptive norms. Studies confirm the relation between descriptive normative beliefs and

subjective descriptive norms (e.g., De Leeuw et al., 2015; Fishbein & Ajzen, 2010; Han et al., 2010). Perceived actions of certain individuals serve as the cognitive foundation for subjective descriptive norms (Fishbein & Ajzen, 2010). This indicates that it is possible to assess descriptive norms directly through the perceived behaviour of important others.

The literature search shows that research in the green hotel context has not examined descriptive normative beliefs and their impact on subjective descriptive norms. Nevertheless, scholars in different environmental settings have stated that beliefs about others' participation in environmental behaviours (descriptive normative beliefs) have a significant impact on the individual's own conservation behaviour (Gockeritz et al., 2009). De Leeuw et al. (2015) state that these beliefs explain 60 per cent of the variance in descriptive norms in the pro-environmental actions of high school students. This result highlights the role of descriptive normative beliefs as active drivers of subjective descriptive norms.

Control Beliefs (Perceived Behavioural Control Element)

According to the TPB framework, *control beliefs* are associated with the existence or deficiency of essential opportunities and resources that assist or hinder conducting a specific behaviour (Ajzen, 1991; Jang et al., 2015). These resources may include the skills and expertise needed to engage in the behaviour (Fishbein & Ajzen, 2010).

As with attitudes and subjective injunctive and descriptive norms, perceptions of behavioural control are expected to stem from readily accessible control beliefs (Ajzen, 1991). Specifically, the expectancy-value model lays the foundation for the conceptualisation of control beliefs in TPB (Ajzen, 1991; Fishbein & Ajzen, 1975). According to this model, control beliefs are assumed to reflect a combination of the strength of these beliefs and one's evaluation of the perceived power of that belief creating the belief-based measure. Ajzen (1991) indicates that the control belief-based measure should correlate with the perceived behavioural control measure. There is an overall support for the hypothesised relation between salient control beliefs and perceptions of perceived control (Ajzen, 2017; Fishbein & Ajzen, 2010).

The inclusion of control beliefs with control behavioural perception will augment the predictive power of the model due to the inclusion of factors that are not under the individual's total volitional control (Ajzen, 1991; Han & Kim, 2010). Perceptions of the availability of resources/opportunities needed to engage in a specific behaviour will produce the perception of behavioural control. In other words, the more opportunities and resources individuals believe they have, the superior should be their perceived control over the behaviour. Research in green hotels has identified the significant influence of control beliefs on perceived behavioural control (Han et al., 2010; Han & Kim, 2010; Kim & Han, 2010). Specifically, these studies identify cost/price, effort, and the hotel location as control beliefs related staying at green hotels (Han et al., 2010; Han & Kim, 2010).

2.3.1.2 Belief elicitation

Beliefs originate from a variety of sources, meaning that individuals from different social backgrounds or personality traits hold different beliefs and such beliefs might change between different behaviours and populations (Ajzen, 1991). According to Ajzen (1991), the TPB framework considers behaviour as a function of salient beliefs that are applicable to the behaviour. Individuals can hold different beliefs about any specific action but only salient beliefs will be the predominant determinants of their behavioural intentions (Ajzen, 1991). As a result, Ajzen (1991) presents belief elicitation to gain in-depth insight into salient beliefs in a given population in a specific context. The results from the elicitation studies provide lists of relevant outcomes, referents, and control elements (Fishbein & Ajzen, 2010).

Although belief elicitation is beneficial, most TPB studies are conducted without its application through only employing the TPB direct constructs (Curtis, Ham, & Weiler, 2010; Downs & Hausenblas, 2005; Sutton et al., 2003). Ajzen (2002) states that belief-based measures would be more comprehensive as they highlight the cognitive foundation related to the perceptions of these constructs. Thus, it is essential to recognise the salient beliefs that individuals impulsively hold when they think about a certain behaviour of interest.

Elicitation studies examining beliefs are necessary for three main reasons. First, to understand the determinants of a target population's engagement in a certain behaviour (Fishbein & Ajzen, 2010). Second, despite the overall effectiveness of the theory, TPB can be augmented through adding factors to increase the predictive power of behaviour in diverse settings (Ajzen, 1991). Elicitation studies can thus assist in identifying additional factors that impact decision-making (Han & Ryu, 2012). Third, elicitation studies could present vocabulary and expressions in the language of the population under study to employ in informing behavioural interventions (Curtis et al., 2010).

In the context of green hotels, according to the researcher's knowledge, there have been only three studies that employ elicitation to understand travellers' beliefs about purchasing green accommodation (Han et al., 2010; Han & Kim, 2010; Kim & Han, 2010). These studies were conducted in the United States, and literature shows that only one has examined the beliefs of Australian travellers related to staying at green hotels. Based on this logic, an elicitation study is warranted to explore the behavioural, normative, and control beliefs of Australian travellers, and to identify any additional factors contributing to their stay at green hotel accommodation.

2.3.1.3 Attitude

Consumer attitudes are among the most studied issues in social sciences (Millar, Mayer, & Baloglu, 2012). Attitude is defined as a person's overall evaluation of the specific behaviour (Ajzen, 1991, 2011). Attitude refers to the inner sentiment and the positive or negative appraisal that ascends when a person engages in specific behaviours (Teng, Wu, & Huang, 2014). Hsu and Huang (2012) further state that attitudes are gained through learning and experience, thus creating a positive or negative valued tendency which leads to a consistent behaviour towards certain defined issues, such as a product or a tourist destination.

Attitude is a measure that captures behavioural beliefs related to a specific behaviour stimulated in a certain context (Klockner, 2013). While beliefs are viewed as a cognitively based structure, attitudes are viewed to be evaluative in nature (Fishbein & Ajzen, 2010). Hence, attitude is associated with a person's

like or dislike of performing a certain behaviour (Han & Kim, 2010). When a person has a more positive attitude, then their intentions towards the behaviour will be more positive, and vice versa (Chen & Tung, 2014). This connection between attitudes towards the specific behaviour and behavioural intentions has been scrutinised and tested in TPB as well as its applications in different contexts (e.g., Albayrak & Caber, 2013; Chang et al., 2014; Chen & Peng, 2012; Dean, Raats & Shepherd, 2012; Jordan et al., 2017; Kashif & De Run, 2015; Mancha & Yoder, 2015). In their meta-analysis on 185 TPB studies, Armitage and Conner (2001) report that attitude accounted for around 50 per cent of the variance of behavioural intention.

Regarding consumers' environmental behaviour, researchers report that individuals' pro-environmental behaviour may still be dominated by personal inconvenience and added costs; however, attitudes certainly impact their purchasing decisions (e.g., Fornara et al. 2016; Han et al., 2011; Manaktola & Jauhari, 2007). According to Fornara et al. (2016), an individual's favourable/unfavourable assessment of a certain pro-environmental behaviour triggers intention for the behaviour. Indeed, Laroche, Bergeron, Tomiuk, and Barbaro-Forleo (2002) report that attitudes are considered the most significant predictors of consumers' intentions to pay a premium price for green products.

In hospitality literature, consumers' attitudes towards visiting green hotels/restaurants are among the main factors affecting their environmental intentions and behaviours (e.g., Baker et al., 2014; Han et al., 2010; Manaktola & Jauhari, 2007). In the case of green hotels, as travellers become more concerned about the environment, their demand for green hotel accommodation is increasing (Manaktola & Jauhari, 2007). In fact, the first and apparent motivation for travellers to stay at green hotels is their attitude (Chen & Peng, 2012; Chen & Tung, 2014; Han et al., 2009; 2010; Verma & Chandra, 2018). Travellers' green attitude is of major significance because they are the main drivers of the green revolution (Han et al., 2009). Some studies even report attitude as the major predictor of intention to stay at a green hotel (Han, 2015; Han et al., 2010; Verma & Chandra, 2018). Han et al. (2009) recommend that hotels should update travellers with their 'green programs' to positively impact

their attitudes and show a greater tendency to stay at a green hotel, thus improving hotels' competitive advantage.

2.3.1.4 Social norms

Social norms are defined as acceptable principles of behaviour common to a group's members (Wang & Ritchie, 2013). Hagger et al. (2007) stated that social norms sum up individuals' perceptions of social influence and whether significant others support their participation in a specific context (Hagger et al., 2007). Social norms originated from Fishbein and Azjen's (1975) study, where they argue that prevailing determinants of behaviour should go beyond attitudes by including a social normative factor.

Previous studies provide evidence that social norms influence the probability of conducting a certain behaviour (Cialdini et al., 1990; Han & Hwang, 2016; Jordan et al., 2017; Klockner, 2013; Matthies, Selge, & Klockner, 2012), highlighting that social norms lead to a sense of commitment to conduct a given behaviour. Social norm induces feelings related to the social pressure people sense about a specific behaviour (Ajzen, 1991). Moreover, when people perceive positive social norms towards that certain behaviour, then their behavioural intentions are more likely to be positive (Han et al., 2010). Han and Hwang (2016) further elaborate that while personal norms are considered intrinsic in nature for motivating actions, social norms are extrinsic in nature and are viewed as the normative drivers of these actions. Lam and Hsu (2006), studying the TPB model in the domain of destination choice, report that social norms had the most substantial impact in explaining a travel decision. In the pro-environmental studies, several researchers claim that normative factors are crucial to better understand the complicated process of environmentally responsible decision-making (Han, 2015; Matthies et al., 2012). In his meta-analysis, Klockner (2013) reports that social norms played a significant role in generating individuals' environmentally substantial behaviours, addressing global environmental challenges.

In the original TPB framework (Ajzen, 1991), social norms referred only to what was supported or not supported by significant others, such as family and friends (subjective norms). While subjective norms were viewed as crucial elements in

understanding decision making (Ajzen, 1991; Cialdini et al., 1990), the concept was criticised for being poorly defined to be of any explanatory use (Conner & Armitage, 1998). Accordingly, some scholars emphasise that the norms should be characterised more comprehensively, referring to what is frequently conducted (subjective descriptive norms) in addition to what is supported and not supported by these influential individuals (subjective injunctive norms) (Gockeritz et al., 2009). Gifford and Nilsson (2014) argue that sometimes group approval (i.e., subjective injunctive norms) motivates people to perform a certain behaviour yet, at times, people perform that behaviour because they perceive that the majority of people do it. This indicates that the actions of significant referents provide guidance that individuals might employ in making decisions regarding their own behaviour (e.g., "If everyone is acting in this manner, then it must be a practical thing to do") (Cialdini et al., 1990; Rivis & Sheeran, 2003). By the same token, descriptive norms identify the most common act in a particular situation, while injunctive norms identify the individual's proposed proper act in that situation (Han & Hwang, 2016).

In their study, De Leeuw et al. state: “In their 2010 monograph, Fishbein and Ajzen formally added descriptive norms to injunctive norms as a second component of subjective norms” (p.129). According to Fishbein and Ajzen (2010), injunctive norms are derived from injunctive normative beliefs, which relate to referents’ thoughts about performing a behaviour, whereas descriptive norms are derived from the descriptive normative beliefs related to referents’ actual behaviour. The effect of descriptive norms on behaviour has been evidenced in different studies that use the TPB model (e.g., De Leeuw et al., 2015; Onwezen, Bartels, & Antonides, 2014).

In the green accommodation context, studies have identified that significant referents who are close/important to individuals exert pressure to stay at green hotels (Han et al., 2010; Verma & Chandra, 2018). Chen and Tung (2014) show that social norms acted as a direct driving force of intention to stay at green hotel accommodation. This is echoed by Han and Kim (2010) and Han et al. (2015). However, these studies do not use the model of the theory that separately assesses injunctive and descriptive norms; therefore, the current study would be

the first to examine the impact of subjective descriptive norms on travellers' intentions to stay at green hotel accommodation.

Having discussed how social norms influence behavioural intentions, it is worth stating that their impact in explaining behaviour is controversial. Several meta-analyses in a variety of behavioural contexts (e.g., physical activity, dietary practices, condom use) report that subjective norms influence intentions in a weak and marginal manner (Armitage & Conner, 2001; Hagger et al., 2007; Hausenblas, Carron, & Mack, 1997; Latimer & Martin Ginis, 2005). Explicitly, in the leisure domain, a number of studies show that the contribution of subjective injunctive norms is sometimes minimal (e.g., Armitage & Conner, 2001; Hausenblas et al., 1997). Various explanations have been presented, and one refers to individual differences. Terry, Hogg, and White (1999) argue that the effect of subjective injunctive norms depends on the level to which the person identifies with the target group. In addition, researchers report that the impact of social norms can be associated with the importance of the situation and population (Cialdini et al., 1990; Rivis & Sheeran, 2003). In relation to the effect of descriptive norms, Rivis and Sheeran (2003) state that the utility of descriptive norms remains unclear because it has been studied in regard to particular behaviours, and with comparatively small sample sizes. Besides, Fishbein and Ajzen (2010) indicate that behaviour is estimated to be affected by the perceived behaviour of others depending on the type of behaviour under investigation. However, from the evidence presented so far, Rivis and Sheeran (2003) conclude that descriptive norms might only be more significant for explaining risky behaviour.

2.3.1.5 Perceived behavioural control

Perceived behavioural control refers to an individual's perception of the potential difficulties and obstacles involved in conducting a certain behaviour (Ajzen, 1991). This factor "reflects the influence of personal capacities and actual constraints regarding the target behaviour on intentions" (Hagger et al., 2007, p. 2). Different control perceptions significantly affect human functioning (Fishbein & Ajzen, 2010), and, "as a possible explanation of behaviour, the construct of control rivals the attitude construct in popularity" (p. 153). In fact, perceived

behavioural control is a substantial element to study due to its link to opportunities and resources accessible when taking a decision (Ajzen, 1991). These opportunities and resources may include time, money, skills, and confidence affecting the capacity to engage in a given behaviour (Chen & Tung, 2014; Han et al., 2010; Paul et al., 2016).

Perceived behavioural control is a concept that addresses individuals' beliefs that they have the ability to complete the behaviour (Ajzen, 2002). The external and irrational factors might not be under the direct control of individuals (Chang et al., 2014; Chen & Tung, 2014). Consequently, the more control that an individual has over the resources and opportunities to engage in a specific act, the more likely such act will be performed. Perceived behavioural control is behaviour-specific and changes within individuals across situations. According to Ajzen (1991), perceived behavioural control is composed of four main dimensions, namely: the difficulty of performing the behaviour; perceived control over performing the behaviour; confidence in conducting the behaviour; and locus of control. This variable is close to Bandura's (1977) notion of self-efficacy, essentially a person's belief that they can take action to deal with certain situations.

The inclusion of this non-volitional element in the TPB model considerably developed the predictive power of the TPB model (Ajzen & Driver, 1992, Paul et al., 2016). That is, in addition to the impact of attitudes and perception of others on behavioural intentions, perceived behavioural control, which is the key aspect that differentiates TPB from TRA, is another determinant of behavioural intentions.

Several studies verify that behavioural intentions are positively affected by individuals' belief in their capability to conduct a given behaviour (e.g., Chang et al., 2014; Chen & Tung, 2014; De Leeuw et al., 2015). Additionally, in hospitality and tourism literature, several researchers such as Lam and Hsu (2004; 2006) and Jordan et al. (2017) report that perceived behavioural control affects travellers' intentions. Such results suggest that when individuals have little control over behaving in a given manner due to the unavailability of necessary resources, their intentions will be lower even though they might have positive attitudes and subjective norms regarding that act. This was also confirmed by Armitage and

Conner (2001) who report a significant association between perceived behavioural control and intention/actual behaviour.

These results have been echoed in terms of pro-environmental behaviour, as studies indicate that such behaviour not only depends on individuals' attitudes and societal constraints, but is also linked to the perception of their ability to conduct such behaviour (Chen & Tung, 2014; Han & Kim, 2010; Paul et al., 2016). Nevertheless, if an individual perceives such pro-environmental behaviour as being too complicated, it is less likely that such action will be conducted. In the green hotel context, travellers' intentions to stay at a green hotel are strongly linked with perceived behavioural control (Chen & Peng, 2012; Han, 2015). Further, Chang et al. (2014) report that travellers' intentions are predominantly affected by perceptions of behavioural control.

2.3.1.6 Intention

Intention, or readiness to perform certain behaviours, is considered the central factor in TPB (Ajzen, 1991). Intention is an indicator of willingness to undertake, and how much energy to expend, in order to conduct a certain action (Ajzen & Driver, 1992). It reflects the individual's expectations about performing a certain behaviour in a particular context and may be viewed as the probability to act (Ajzen, 1991; Hsu & Huang, 2012). Several scholars in different domains have studied the development of intentions to further understand consumer purchase decisions (Eddosary, Ko, Sagas, & Kim, 2015; Fishbein & Ajzen, 2010; Kim & Han, 2010). While the classifications of this element may differ through these studies, scholars propose that intentions include one's willingness to engage in a certain action. Several theories, such as the theory of reasoned action (TRA) (Fishbein & Ajzen, 1975), the theory of planned behaviour (TPB) (Ajzen, 1991), or the attitude-behaviour theory (Triandis, 1977), state that individuals' behaviours are predictably based on their intentions. Behavioural intentions are "goals pictured in the mind's eye" (Heckhausen & Beckmann, 1990, p. 36).

In the TPB framework, the perception of intention is grounded in the theory's framework and is directly determined by the attitude towards behaviour, perceived norms, and perceived control. Fishbein and Ajzen (2010) state: "As a

general rule, the more favourable the attitude and perceived norm and the greater the perceived behavioural control, the stronger should be the person's intention to perform the behaviour in question. However, the relative importance or weight of these three determinants of intention is expected to vary from one behaviour to another and from one population to another" (p. 21).

To answer the question of how precise intention predicts behaviour, Sheeran's (2002) meta-analysis examines the intention-behaviour relation. Across 422 studies, intentions accounted for around 28 per cent of the variance in subsequent behaviour, indicating that intentions are strong predictors of behaviour (Sheeran, 2002). Consequently, it is critical to seek a thorough understanding of consumers' intentions, as their intentions can generally predict behaviour. In the green hotel context, the intention to stay at such hotels is a behaviour that encompasses components of individual ethics and social responsibility (Chen & Tung, 2014). Studies illustrate that TPB is an influential predictor of travellers' intentions to stay at such hotels (Han & Kim, 2010; Kim & Han, 2010; Teng et al., 2015). Thus, individuals' intentions to stay at (and, ultimately, actually stay at) a green hotel are an important measure of a consumer's psychological perspective.

2.3.2 Extending the TPB model

The TPB model has been effectively used to explain a variety of behaviours, and several meta-analyes support the theory's predictive ability. For instance, Ajzen (1991) reports that attitude, subjective norms, and perceived behavioural control account for an average of 50 per cent of the variance in intention across different applications. A review on the TPB studies also reports that TPB explains 40 and 50 per cent of the variance in intention (Sutton, 1998). Moreover, in their meta-analysis, Armitage and Conner (2001) state that the model offers strong predictive power, averaging 40 per cent of the variance in intentions across 154 different applications. Another meta-analysis generated by McEachan, Conner, Taylor, and Lawton (2011) produced comparable results. Although the effect size is notable, it is evident that TPB does not account for all the variance in social behaviour, and leaves a significant amount of unanswered variance in intentions and behaviour (Armitage & Conner, 2001). Consequently, extending the TPB

framework may be undertaken by adding further constructs to increase the predictive power of the model (Perugini & Bagozzi, 2001). Indeed, Ajzen (1991) elaborates that TPB is an extension of the theory of reasoned action (previously discussed in section 2.3), and was developed by adding the construct of perceived behavioural control.

The theory can be broadened and deepened; however, Fishbein and Ajzen (2010) state that the extension of TPB should proceed cautiously, and they provide some guiding criteria. The additional predictors should be conceptually different to existing constructs of the theory; such determinants should be regarded as causal factors that impact decisions; and they are theoretically appropriate to a wide range of behaviours in different contexts (Ajzen, 1991; Fishbein & Ajzen, 2010). This contributes to producing an improved understanding of the theoretical appliance of TPB and to augmenting its ability to explain intention and behaviour in different settings. In other words, the application of the TPB framework in a particular context, such as staying at green hotels, could benefit other domains.

Several researchers have successfully augmented the theory by adding concepts that are viewed to be vital in a particular setting (e.g., Atombo et al., 2017; Han, 2015; Paul et al., 2016; Record, 2017; Yadav et al., 2018). For example, anticipated affect is reported to impact intentions and behaviour independent of the additional factors in the model, which accounts for a supplementary of the discrepancy in intentions and behaviour (Abraham & Sheeran, 2003; Ajzen, 1991; Sandberg & Conner, 2008). Further, the frequency of past behaviour is reported as critical to the decision-making process as it contributes independently to the likelihood of intentions (Ajzen, 1991; Lam & Hsu, 2006; Sandberg & Conner, 2008). Personality variables are found to moderate the associations between intention and the actual behaviour (Chatzisarantis & Hagger, 2005). Self-identity (Rex, Lobo, & Leckie, 2015; Sparks & Shepherd, 1992), group norms (Hamilton & White, 2008), and perceived support (Chatzisarantis, Hagger, & Brickell, 2008) augment the explanatory power of the theory of planned behaviour. The addition of these constructs elevates the percentage of explained variance in intentions and in actual behaviour. The primary explanation of such results is that the sufficiency assumption of TPB is invalid (Ajzen, 1991).

Based on the previous discussion, consumers' intentions may be assessed by the fundamental constructs of TPB (attitudes, social norms and perceived control). Moreover, the basic model could be expanded through the inclusion of other vital determinants (Han, 2015; Jordan et al., 2017). Ajzen (1991) indicates that the TPB framework is open to further extension if additional significant constructs can capture a substantial proportion of the variance in intention. Several scholars were successful in extending the theory by adding predictors that are viewed to be crucial in a particular setting. Though ample consumer research on purchase intentions in pro-environmental domain exists, few studies focus on the effect of green knowledge on consumers' purchase intention.

2.3.2.1 Green hotel knowledge

A crucial element in creating successful marketing strategies is the recognition of what is vital to the decision-making process. Explicitly, the state of the consumers' knowledge about a particular product or service significantly influences their purchase decision (DiPietro et al., 2013; Shin et al., 2018).

Several researchers conclude that knowledge related to products and services plays a significant and conclusive part in the decision-making process as it directly impacts the usage of existing knowledge and obtaining new knowledge (Fodness & Murray, 1999; Laroche et al., 2002). Specifically, knowledge has been reported to be able to impact consumers' conclusions and reduce uncertainty (Lee & Ro, 2016; Teng et al., 2018; Shin et al., 2018). In fact, knowledgeable consumers are more likely to have confidence in decision-making as they have significant knowledge that enables them to expect less risky outcomes (Shin et al., 2018). As a result, providing knowledge increases consumer consumption (Babakhani et al., 2017; Kim et al., 2016; Laroche et al., 2002), suggesting improvements in communication are a prerequisite for inducing desired consumer behaviour (Kim et al., 2016).

In the current study, extending the TPB model by adding 'green knowledge' in this research meets the indicated criteria of Ajzen (1991) previously discussed in section 2.3.2. Several researchers have verified that green knowledge has a considerable impact on consumers' decision-making, and have used it in

explaining a range of behaviours (Gao et al., 2016; Miao & Wei, 2013). According to Mannetti, Pierro, and Livi (2004), green knowledge is supposed to be a strong determinant of behavioural intentions. In the TPB framework, several studies propose that there is a need to consider knowledge because it would be estimated to impact intentions, analogous with attitudes, social norms and perceptions of behavioural control (Aertsens, Mondelaers, Verbeke, Buysse, & Van Huylenbroeck, 2011; Dumitrescu et al., 2011; Xiao et al., 2011). Consequently, it seems reasonable to suggest that knowledge about green hotels may also take on added salience regarding pro-environmental behaviours and that a measure of green hotel knowledge could add predictive ability to the model.

In the pro-environmental area, green knowledge is defined as knowledge related to facts, perceptions and relationships concerning the environment (Chen & Peng, 2012; Gao et al., 2016; Mostafa, 2007). With the growing awareness of environmental issues, consumers are becoming more alert to environmental solutions (Gao et al., 2016; Han et al., 2011). Consequently, this increased awareness of 'green' knowledge is shown to impact consumers' purchasing decisions (Chen & Peng, 2012; Laroche et al., 2002). Ajzen, Joyce, Sheikh, and Cote (2011) state that attaining environmental knowledge could be unrelated to decision-making processes. They argue that, instead of attempting to ensure that individuals have knowledge, there is a necessity to detect the specific beliefs consumers hold about certain issues and how these beliefs motivate their intention and behaviour. Nevertheless, there is ample evidence to suggest that consumers' knowledge influences their green behavioural intentions (e.g., Hines, Hungerford, and Tomera, 1987; Chen & Peng, 2012; Hu et al., 2010; Tan, 2011). This indicates that consumers are inclined to engage in a certain pro-environmental behaviour as they perceive the behaviour as more relevant to them due to their knowledge.

Consumers' environmental knowledge is critical since the green revolution is primarily driven by consumers, as more consumers search for businesses that incorporate green practices into their operations (Chen & Peng, 2012; D'Souza, Taghian, Lamb, & Peretiatkos, 2006; Hu et al., 2010; Prud'homme & Raymond, 2013; Rahman & Reynolds, 2016). This situation denotes that if consumers grasp a better consideration of environmental issues and transfer this knowledge into

pro-environmental consumption patterns, it is likely that businesses will be stirred to embrace the green notion (Chan & Hsu, 2016). Similarly, in the hospitality industry, as environmental awareness increases, travellers with pro-environmental knowledge may choose to stay at a green hotel rather than a traditional hotel (Han et al., 2011; Manaktola & Jauhari, 2007). Nimri et al. (2017) found that Australian travellers need pertinent knowledge regarding the green practices implemented in hotels in order to impact their intentions to stay at green hotels. In another study, Chen and Peng (2012) report that travellers with advanced environmental knowledge tend to stay at green hotels if they hold positive attitudes towards green accommodation. Therefore, hoteliers should trigger perceptions of practical knowledge about pro-environmental sustainability, to enable their guests to select mindful environmental booking choices (Ponnapureddy et al., 2017).

2.3.3 TPB in the green hotels context

A review of academic journals reporting research employing TPB to understand travellers' behaviour in green hotels has been conducted. Han et al. (2010), the first authors to utilise TPB in the green hotels' context, explain how travellers frame their decisions to stay at such hotels. Following Han et al.'s (2010) study, most further studies focus on travellers' intentions to stay at green hotels (Chang et al., 2014; Chen & Tung, 2014; Han, 2015; Han et al., 2010; Han & Kim, 2010; Han & Yoon, 2015b; Kim & Han, 2010; Teng et al., 2015; Verma & Chandra, 2018; Wang, Wang, Wang, Li, & Zhao, 2018; Yadav et al., 2018). Yet, few researchers attempt to examine the behavioural, normative and control beliefs of those travellers (Han et al., 2010; Han & Kim, 2010; Kim & Han, 2010). In particular, the studies examining the effect of beliefs use normative subjective beliefs and subjective norms, and do not examine descriptive beliefs and norms (Han et al., 2010; Han & Kim, 2010; Kim & Han, 2010; Wang et al., 2018). In addition, most of the studies add several constructs to the theory, and have been conducted in the US, Taiwan, China and India. From these studies, it is evident that there is a gap in employing the full model of the theory in the green hotel context starting from beliefs and by incorporating both descriptive and injunctive beliefs and norms. Besides, only one study has added green hotel knowledge to the TBP. Han and Kim (2010) argue that the role of knowledge should be

investigated, as it may lead to more understanding of travellers' decision-making in the green lodging context. Thus, the present study proposes to examine the role of green hotel knowledge by adding it to the TPB framework to address the gap in the literature. Further, this study uses 'interventions' to test the impact of different message framing on travellers' behavioural intentions towards green hotel accommodation which will be presented in the next section.

2.4 Theory-Based Interventions

In response to the growth of environmental awareness, individuals are starting to amend their behaviour to moderate the impact of environmental problems. Several studies indicate that individuals modify their behaviour to decrease their own environmental effect (Gössling & Peeters, 2015; Harper & Snowden, 2017; Zeppel & Beaumont, 2014). These studies evidence that individuals might choose to adopt specific environmental behaviour patterns, the challenge remains, however, in initially influencing their behaviour (Doppelt, 2017; Stead et al., 2005; Steg & Vlek, 2009).

Interventions are suggested as a method designed to produce changes in individuals' intention and behaviour. Interventions are characterised in extant literature as programmes and strategies intended to influence behaviour positively (Glanz & Bishop, 2010). However, even the most operational interventions do not lead to substantial changes in behaviour (Hardeman et al., 2002). This may be because interventions are not based on theories of social behaviour, although these theories have shown success in predicting and explaining behaviour (Chatzisarantis & Hagger, 2005; Hardeman et al., 2002). This is confirmed by Truong and Dang (2017) who indicate that theory-based interventions are limited in academic research. Kao et al. (2017) further elaborate that if a study has a supporting theoretical framework, only then researchers may be able to explain or predict the study outcomes with accuracy. Therefore, it is safe to state that valid theories can serve as the blueprint for interventions.

2.4.1 TPB interventions

A recent study by Truong and Dang (2017) points out that TPB is one of the most commonly used theories in interventions. Other researchers also employ this theory as a basis for many successful intervention programmes (e.g., Chatzisarantis & Hagger, 2005; Kothe, Mullan, & Butow, 2012; Pang, Rundle-Thiele, & Kubacki, 2017). A significant challenge in developing an effective intervention in the TPB framework is to direct this intervention to factors that are most likely to affect the studied behaviour (Elliott & Armitage, 2009). In environmental psychology, it is suggested to detect entry points for interventions in order to modify the relevant behaviour (Fishbein & Ajzen, 2005; Klockner, 2013). Interventions suggested in studies employing TPB focus on one or more of its direct constructs: attitudes, social norms, and perceptions of behavioural control (Ajzen, 2017). Variations in these constructs should generate changes in intentions (Ajzen, 2017; Fishbein & Ajzen, 2010).

Further, Sheeran (2016) reports the effectiveness of interventions in changing attitudes, norms, and perceived control in 155 studies in health behaviour. Abrahamse, Steg, Vlek, and Rothengatter (2005), exploring 38 intervention studies aimed at household energy conservation, state that interventions are more operative when they target direct causes of behaviour. Yet, Chatzisarantis and Hagger (2005) report that interventions should also target salient beliefs. They elaborate that targeting beliefs would be more useful for improving the TPB direct constructs and intentions. Stead et al. (2005) further state that it is possible to examine previous TPB studies in specific contexts to identify the beliefs that are likely to be most salient in the formation of attitude, subjective norms and perceived behavioural control. Additionally, Fishbein and Ajzen (2010) further explain that since attitudes, social norms, and perceptions of control are presumed to be grounded on parallel sets of beliefs, interventions should attempt to impact these beliefs, which are based on the theory and, eventually, direct behaviour.

In their review of 13 TPB-based interventions, Hardeman et al. (2002) report on a study that examined the impact of the intervention on the full range of TPB variables, including all behavioural, normative and control beliefs. Further, since

behaviour change interventions are often complex, it is crucial to identify the active ingredients of change by examining each one independently (Montanaro, 2014). Therefore, there is a need to examine the impact of interventions on both the beliefs and the direct constructs of TPB.

2.4.2 Persuasive communication

According to Kao et al. (2017), in extant literature, the intervention development process is poorly described. Fishbein and Ajzen (2010) state that TPB offers little guidance regarding the means, strategies, or techniques for developing interventions as it does not dictate what kind of intervention will be most effective. Consequently, some behaviour change interventions are either not explained or not classified. Again, De Ridder and De Wit (2006) add that intervention contents are often 'glossed over' in method reporting, leaving it unclear how most interventions were developed. This is confirmed by Chesney (2006) as she states there is no golden rule for interventions, or the best intervention, for all settings.

Ajzen (2017) does not state a specific method for developing an effective intervention but elaborates that interventions should be based on the researcher's experience and creativity. One type of intervention that could be considered in the TPB framework is persuasive communication (Ajzen, 2017). Gössling and Buckley (2016) link persuasive communication to presenting information to people in means that trigger them to modify their pertinent behaviours. The effectiveness of persuasive communications for changing human behaviour has been documented in the domain of social marketing (Babakhani et al., 2017; Gössling & Buckley, 2016). The behaviours successfully affected include physical exercise (Jones, Sinclair, & Courneya, 2003; Parrott, Tennant, Olejnik, & Poudevigne, 2008), anti-smoking (Hammond, Reid, Driezen, & Boudreau, 2012), increase of fruit and vegetable intake (Kothe et al., 2012), weight loss and obesity (Kreuter, Bull, Clark, & Oswald, 1999; Young, Subramanian, & Hinnant, 2016) and charity donations (Burt & Strongman, 2005). Because consumers react to messages based on individual interpretations of the associated content, it is essential to understand the effects of message framing and content on consumers' attitudes and behaviour (Babakhani et al., 2017).

One of the means of persuasive communications is the use of pictorial elements. The ability of pictures to stimulate emotion makes it an effective means for communicating messages (Perrin, 2011). Pictures are a traditional method for inducing imagery and entail subjective knowledge (Hammond et al., 2012; MacKay & Fesenmaier, 1997). Furthermore, pictures can stimulate and motivate affective responses from individuals (Perrin, 2011). The implications of using pictures can affect individuals through the creation of expectations and the desire for image verification (MacKay & Fesenmaier, 1997). Research in different domains including health, education, exercise and marketing suggest that the addition of pictures to educational materials will change both intention and behaviour (Houts, Doak, Doak, & Loscalzo, 2006; Parrott et al., 2008; Perrin, 2011; Previte, Russell-Bennett, & Parkinson, 2015). For instance, the use of images can impact behavioural change in drinking (Previte et al., 2015), physical activity (Jones et al., 2003), weight loss (Kreuter et al., 1999), and smoking (Hammond et al., 2012). From another aspect, Houts et al. (2006) indicate that information conveyed with pictures is rated more positively than information with only text. This might be due to images, instead of the text message, being mainly responsible for producing emotional responses and positive behaviour change (Hammond et al., 2012). However, in environmental communication literature, Perrin (2011) indicated that little research addressed the impact of message modality and framing on pro-environmental behavioural intentions.

2.4.2.1 Message framing

In relation to persuasive communications, extant literature indicates that individuals respond differentially to communication depending on how the communication is framed (Babakhani et al., 2017; Cornelissen, Pandelaere, Warlop, & Dewitte, 2008; Jones et al., 2003). Messages can be framed either in terms of potential advantages or disadvantages. Positive framing is associated with presenting the positive outcomes of engaging in the action and emphasising the potential benefits of the promoted behaviour (Masnovi, 2013; Truong & Hall, 2017). By contrast, negative framing is related to presenting the negative outcomes and the harmful impact of the undesirable behaviour (Truong & Hall, 2017).

It is anticipated that negative information using negative-framed persuasive message should produce superior message engagement than do positive-framed persuasive messages (Newhagen & Reeves, 1992; O'Keefe & Jensen, 2008; Perrin, 2011). Hence, focusing on negative information and emphasising the undesirable outcomes are more potent than their positive counterparts (Newhagen & Reeves, 1992; O'Keefe & Jensen, 2008). This has been documented in the literature as prior research shows that negative messages increase emotional arousal (Newhagen & Reeves, 1992). People experience greater arousal when they are exposed to negative messages than when they are exposed to comparable positive images and alter their behaviour accordingly (Newhagen & Reeves, 1992; Perrin, 2011). However, Masnovi (2013) argues that negative framing evokes strong adverse reactions that lead to the highest ratings of anxiety, worry, fear, and frustration with little impact to change behaviour. Another probable clarification is that loss-framed messages could evoke adverse reactions (O'Keefe & Jensen, 2008). Negative appeals have an inconsistent impression on evaluations and are perceived at lower levels of exposure than compared to otherwise-equivalent positive appeals (O'Keefe & Jensen, 2008).

On the other hand, positively-framed messages may produce considerably superior engagement than do loss-framed messages (Houts et al., 2006; Jones et al., 2003; Parrott et al., 2008; Previte et al., 2015). Such messages appear as more enthusiastic or more embedded with positive emotions than loss-framed appeals and, subsequently, receivers may be willing to perform the recommended behaviour more closely (O'Keefe & Jensen, 2008). In their meta-analysis, O'Keefe and Jensen (2008) indicate that gain-framed messages stimulate significantly better message engagement when advocating prevention behaviours.

In the context of pro-environmental behaviour, the effect of message framing has been limited (Perrin, 2011). Nevertheless, positive framing, related to green behaviour, has been used as a marketing tool that will lead to more environmentally friendly behaviours (Cornelissen et al., 2008). Framing messages with positive environmental behaviours affect pro-environmental self-perception more vigorously, thus raising a sense of environmental obligation and choices (Cornelissen et al., 2008). In the same context, Lord (1994) reports that

positive appeals result in more favourable beliefs and attitudes about green behaviour such as recycling. Further, according to Paul et al. (2016), positive framing has a significant relationship with environmental behaviour even if green products are viewed as being more expensive. Gössling and Buckley (2016), studying the impact of persuasive communication to assess whether the information provided by existing carbon labels in tourism is comprehensive, indicate that carbon labels providing factual information are perceived positively by 60 per cent of participants. They further argue that when such communication is perceived as positive, then it becomes critical in consumer choices.

As for the impact of persuasive communications on attitudes, the framing and content of messages can influence attention and emotions, and can also affect attitudes (Jones et al., 2003). In the pro-environmental context, negatively-framed messages may alienate individuals (Huang, Cheng, Chuang, & Kuo, 2016). As for the use of positive and gain message frames, they help develop such communication messages, accordingly shifting attitudes towards adoption of pro-environmental behaviour (Babakhani et al., 2017). Cornelissen et al. (2008) further elaborate that positive framing renders individuals' attitudes towards pro-environmental behaviours more favourably, enabling them to perceive themselves as more environmentally responsible.

In regard to social norms, extant literature indicates that positive messages related to the benefits and advantages of a certain behaviour might not have an effect on social norms (Chatzisarantis & Hagger, 2005). Impacting such norms may be extremely difficult with any mediated intervention approach focusing on gains and losses (Chatzisarantis & Hagger, 2005; Parrott et al., 2008).

Findings regarding perceived behavioural control indicate that positive framing has a substantial impact on control perceptions (Parrott et al., 2008). This may be attributed to the components of control enhancement illustrated in positively-framed messages (Parrott et al., 2008). Perceived behavioural control should be manipulated in interventions by creating conditions that facilitate engaging in the behaviour (Chatzisarantis & Hagger, 2005). By attempting to highlight the benefits of a particular behaviour, such positive messages might give individuals

new ideas to engage in the behaviour, thereby decreasing perceived obstacles (Parrott et al., 2008).

As for the impact of persuasive communications on perceived knowledge, prior research demonstrates the success of information in influencing knowledge (Gössling & Buckley, 2016; Perrin, 2011). Bamberg, Ajzen, and Schmidt (2003) claim that employing an informational intervention appears to have more impact on knowledge and intentions to modify behaviour. In clinical trials, using persuasive communications has been found to improve patients' understanding of their participation in such trials (Kao et al., 2017). This is echoed by Gössling and Buckley (2016), who indicate that using persuasive communication increases environmental knowledge and facilitates choosing a greener alternative. Therefore, interventions using message framings are expected to induce some level of awareness that can be noticed in changes in behaviour (Bamberg et al., 2003).

2.5 Demographic Characteristics

Extant literature has examined the role of demographic profiles to comprehend consumer behaviour better in several settings. Notably, the impact of gender, age, education and income on travellers' decisions is verified by some studies in the green hotel setting (e.g., Berezan et al., 2014; Han et al., 2009; 2011; Ponnapureddy et al., 2017), however, the results are shown to be contradictory.

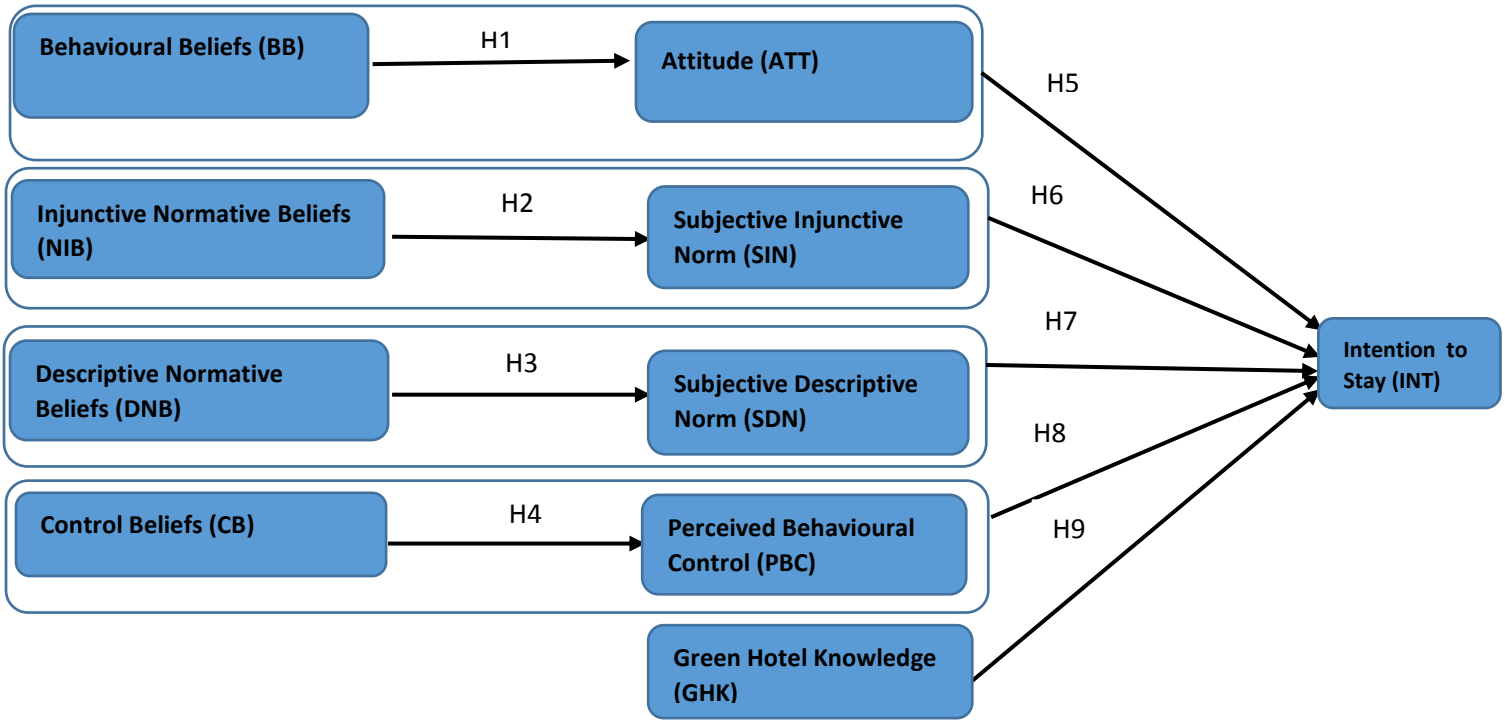
Starting with gender, Han et al. (2009) report that females tend to be more environmentally mindful and more frequently form green purchasing intentions towards green hotels. Further, Berezan et al. (2014) report that women are more fulfilled with all of the practices implemented in green hotels than men. Kim, Lehto, and Morrison (2007) argue that females tend to rely on different sources of knowledge prior to making a decision. Indeed, they depend on evidence in the external world rather than resort to their personal judgments. In a recent study, Ponnapureddy et al. (2017) report that the relation between gender and green booking intentions is insignificant.

Age is another personal aspect that has received substantial attention, although the results in green consumer behaviour studies are inconsistent. For instance, Ponnapureddy et al. (2017) report that travellers who make green purchasing decisions regarding booking hotels tend to be younger. They further state that younger people tend to be more knowledgeable about green hotels which may motivate them to book in such hotels. Nevertheless, in their studies, Han et al. (2011) and Berezan et al. (2014) indicate that intentions to stay at green hotels are not statistically significant among different age groups.

The vital role of income and education in affecting pro-environmental decision-making has also been identified in extant literature. In developing a profile of green travellers who book in to a green hotel, Han et al., (2011) proposed that travellers who have higher degrees and earn more tend to form intentions to stay in green hotels more actively. The results of their study indicate that components of intentions do not significantly change among different education and income groups. Furthermore, in their study, Berezan et al. (2014) report that there are no actual variances between the education groups on travellers' involvement in green hotel practices. In sum, previous research related to personal characteristics shows contradictory results regarding travellers' intentions as an outcome of their demographic characteristics (i.e., gender, age, education, and income), suggesting that further research is warranted in this area.

2.6 Research Model and Hypotheses Development

Based on this literature review, this study proposes to extend the TPB model of Fishbein and Ajzen (2010) and initiate a research framework that would assist in validating the decision-making of travellers in the context of green hotel accommodation in Australia. The study posits extending the TPB model by adding green hotel knowledge to the TPB original constructs, namely: behavioural beliefs, attitude, injunctive normative and description beliefs, subjective injunctive and descriptive norms, control beliefs, perceived behavioural control and intention. Nine hypotheses are put forward to test the research model in Figure 2.2. The rationale for each hypothesis follows in the next section.



**The research randomly assigned an intervention to two groups of participants and no intervention to the third group of participants.*

Figure 2.2 Proposed theory of planned behaviour model (adapted from Fishbein & Ajzen, 2010, p.22)

2.6.1 Effect of behavioural beliefs on travellers' attitude (attitudinal element)

RQ 2: Do travellers' behavioural beliefs have an impact on their attitude to stay at a green hotel?

Behavioural beliefs relate to the positive or negative outcomes individuals might experience if they perform a behaviour (Ajzen, 1991; Choi, Jang, & Kandampully, 2015). These outcome expectancies are assumed to determine attitudes that are individuals' evaluations of their performance of the specific behaviour (Ajzen, 2017; Fishbein & Ajzen, 2010). Several studies report that behavioural beliefs have a positive influence on attitude (Ajzen, 1991; De Leeuw et al., 2015; Han & Kim, 2010; Kim & Han, 2010). In the green hotel context, Han et al. (2010) have found that travellers' behavioural beliefs create favourable attitudes and eventually positive intentions towards staying at green hotel accommodation. Based on the literature it is hypothesised that travellers' behavioural beliefs will influence their attitude and accordingly propose:

H1: Travellers' behavioural beliefs will have a positive and significant impact on their attitudes about staying at a green hotel.

2.6.2 Effect of injunctive normative beliefs on subjective injunctive norm (subjective injunctive norm element)

RQ 3: Do travellers' injunctive normative beliefs have an impact on their subjective injunctive norms to stay at a green hotel?

Injunctive normative beliefs relate to the likelihood that significant referents support or do not support conducting a specific behaviour (Ajzen, 2017). According to Han et al. (2010), these important others are people close to the individual who impact their decision-making. Ajzen (1991) assumes that subjective injunctive norms are determined by the total set of accessible injunctive normative beliefs regarding the expectations of significant others. When important referents regard engaging in a specific behaviour as an appropriate act, perceived social pressure would increase the motivation to comply with this behaviour (Ajzen, 1991). Prior studies report a positive influence of injunctive normative beliefs on subjective injunctive norms towards staying at green hotel accommodation (e.g. Han et al., 2010; Han & Kim, 2010; Kim & Han, 2010).

H2: Travellers' injunctive normative beliefs will have a positive and significant impact on their subjective injunctive norms towards staying at a green hotel.

2.6.3 Effect of descriptive normative beliefs on subjective descriptive norm (subjective injunctive norm element)

RQ 4: Do travellers' descriptive normative beliefs have an impact on their subjective descriptive norms to stay at a green hotel?

Descriptive normative beliefs relate to the perceived behaviours of significant referent individuals or groups (Ajzen, 2017; Fishbein & Ajzen, 2010). These beliefs are based on the observed actions of those significant referents (Ajzen, 2017). Perceptions of strong descriptive beliefs produce subjective descriptive

norms (Fishbein & Ajzen, 2010). Scholars report that beliefs regarding others' participation in environmental behaviours (descriptive normative beliefs) have a strong association with one's own behaviour towards the environment (Gockeritz et al., 2009; Rivis & Sheeran, 2003). De Leeuw et al. (2015) report that descriptive normative beliefs explain 60 per cent of the variance in subjective descriptive norms in environmentally-responsible behaviour. These findings point out that descriptive normative beliefs are active drivers of subjective descriptive norms.

H3: Travellers' descriptive normative beliefs will have a positive and significant impact on their subjective descriptive norms towards staying at a green hotel.

2.6.4 Effect of control beliefs on perceived behavioural control (perceived behavioural control element)

RQ 5: Do travellers' control beliefs have an impact on their perceptions of behavioural control to stay at a green hotel?

According to the TPB framework, control beliefs are defined as the perception of the existence or absence of resources and opportunities needed to engage in a certain action, and evaluation of the level of importance of these resources and opportunities to achieve the results (Ajzen, 1991; Jang et al., 2015). If individuals identify more facilitating than restricting factors related to performing the behaviour, then perceptions of behavioural control should be higher (Ajzen, 2017; Fishbein & Ajzen, 2010). The inclusion of control beliefs with control behavioural perception will increase the predictive power of the TPB model due to the inclusion of factors that are not under total volitional control (Ajzen, 1991; Han & Kim, 2010). Prior research in green hotels has identified a positive influence of behavioural beliefs on perceived behavioural control (Han et al., 2010; Han & Kim, 2010; Kim & Han, 2010).

H4: Travellers' control beliefs will have a positive and significant impact on their perceived behavioural control towards staying at a green hotel.

2.6.5 Effects of attitudes on intentions to stay at a green hotel

RQ 6: Do travellers' attitudes have an impact on their intentions to stay at a green hotel?

Attitudes are sets of beliefs about a particular behaviour, which may translate into intention to perform the behaviour (Ajzen, 1991). Attitudes are essential, as consumers need to understand their attitudes to affect the perceived obstacles they face (Smith & Paladino, 2010). Attitudes influence the held intentions and the more favourable the attitude, the stronger the behavioural intention will be. The relationship between the attitude towards the specific behaviour and the behavioural intention is illustrated in many studies (e.g., Arli, Tan, Tjiptono, & Yang, 2018; Chang et al., 2014; Kashif & De Run, 2015; Mancha & Yoder, 2015). Moreover, in the green hotel context, several scholars show that travellers' attitudes towards staying at green hotel accommodation have a positive influence on their intentions (Chen & Tung, 2014; Han & Kim, 2010). Some studies even report that attitude is the primary predictor of intention to stay at a green hotel (Han, 2015; Han et al., 2010; Kim & Han, 2010).

H5: Travellers' attitudes will have a positive and significant impact on their intentions to stay at a green hotel.

2.6.6 Effects of subjective injunctive norms on intentions to stay at a green hotel

Research Question 7: Do travellers' subjective injunctive norms have an impact on their intentions to stay at a green hotel?

Subjective injunctive norms refer to the belief concerning whether significant others approve or disapprove of the particular behaviour (Ajzen, 1991). Subjective injunctive norms identify the importance of reference groups by discovering the degree to which individuals will be motivated to comply with such groups (Arli et al., 2018). There is an increasing indication that the presence of strong social awareness has a direct impact on one's purchase intention (Ajzen, 2017; Fishbein & Ajzen, 2010). Several studies report that subjective norms play

a crucial role in predicting travellers' intentions to stay at a green hotel (e.g. Chen & Peng, 2012; Han et al., 2010). Some scholars even indicate that subjective norms are the strongest determinant of intention to stay at a green hotel (Han & Kim, 2010; Teng et al., 2015). Individuals' intentions towards staying at green hotels increase significantly when they believe their close family, other relatives, friends and colleagues will value this specific behaviour (Han et al., 2010). In other words, injunctive norms acknowledged through social interfaces may significantly affect travellers' behavioural intentions towards staying at a green hotel.

H6: Travellers' subjective injunctive norms will have a positive and significant impact on their intentions to stay at a green hotel.

2.6.7 Effects of subjective descriptive norms on intentions to stay at a green hotel

RQ 8: Do travellers' subjective descriptive norms have an impact on their intentions to stay at a green hotel?

Subjective descriptive norms refer to perceptions of the behaviour of significant referents (Fishbein & Ajzen, 2010). Researchers indicate the actions of significant referents provide guidance that individuals might employ in making decisions regarding their own behaviour (Cialdini et al., 1990; Rivis & Sheeran, 2003). As the injunctive norm construct might not be adequate to comprehend the social norm-intentions relationship entirely, there is a need to consider descriptive norms in the TPB model to understand how norms influence behavioural intentions (De Leeuw, Valois, Morin, & Schmidt, 2014). Furthermore, in their study about pro-environmental behaviour, De Leeuw et al. (2015) report that descriptive norms have a significant influence on intentions to engage in pro-environmental behaviours demonstrating that what others do to protect the environment is crucial.

H7: Travellers' subjective descriptive norms will have a positive and significant impact on their intentions to stay at a green hotel.

2.6.8 Effects of perceived behavioural control on intentions to stay at a green hotel

RQ 9: Do travellers' perceptions of behavioural control have an impact on their intentions to stay at a green hotel?

Scholars generally agree that different control perceptions significantly affect human functioning (Ajzen, 2017; Fishbein & Ajzen, 2010). Perceived behavioural control refers to an individual's perception of the potential obstacles of conducting a given behaviour (Ajzen, 1991). Specifically, perceived behavioural control evaluates how well an individual can control elements that may simplify or restrain the acts in a specific situation (Han et al., 2010). Several studies demonstrate that people's perception of control has a positive influence on their behavioural intentions (See De Leeuw et al., 2015; Kashif & De Run, 2015; Mancha & Yoder, 2015; Paul et al., 2016). As the perception of behavioural control increases, this will lead to an increase in intentions. In the green hotel context, several studies indicate that perceptions of behavioural control have a positive impact on intentions to stay at green hotels (Chen & Peng, 2012; Han, 2015; Han et al., 2010; Han & Kim, 2010). Some studies even report that perceived behavioural control is the strongest predictor of intention towards staying at green hotels (Chang et al., 2014; Chen & Tung, 2014). Therefore, it is essential to examine the impact of travellers' perception of control on intentions towards staying at green hotels.

H8: Travellers' perceived behavioural control will have a positive and significant impact on their intentions to stay at a green hotel.

2.6.9 Effects of green hotel knowledge on intentions to stay at a green hotel

RQ 10: Does travellers' green knowledge have an impact on their intentions to stay at a green hotel?

Green knowledge is an overall knowledge of realities and notions concerning the environment and its systems (Gao et al., 2016). In other words, green knowledge

encompasses what individuals know about the environment and critical associations causing environmental effects, and collective responsibilities leading to sustainable improvement (Vazifehdoust, Taleghani, Esmaeilpour, & Nazari, 2013). Attaining a high level of green knowledge has a substantial influence on consumers' intentions to purchase green products and services as it triggers pro-environmental behaviour (Ward, Barber, & Barth, 2011). Environmental knowledge has been reported as a major factor that impacts consumers' behavioural intentions towards green hotels and restaurants (Gao et al., 2016). Green hotel knowledge should be considered as important in understanding travellers' intentions to stay at a green hotel. That is, the more a person attains green hotel knowledge, the more likely they are willing to stay at a green hotel (Chen & Peng, 2012).

H9: Travellers' green hotel knowledge will have a positive and significant impact on their intentions to stay at a green hotel.

2.7 Chapter Summary

This chapter reviewed pertinent literature relating to this research. The significance of examining consumer behaviour in the green hotels' context has been established. Synthesis of significant areas and gaps in the literature that informed the research aims for this study was presented. In addition, the need for a theoretical lens to investigate consumer behaviour in the green hotel context has been discussed. Thus, the TPB framework has been employed, with extensions that have been supported in the body of literature. Also, the lack of studies that presented any intervention utilising TPB in the green hotels setting has been highlighted. Finally, hypotheses for the current research have been put forth. The next chapter explains the research design with justification for the adopted research methods and operationalisation of the suggested framework in addition to the generation of appropriate sample and data analysis methods.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Chapter Introduction

This chapter explains the methodology applied to investigate Australian travellers' intentions to stay at green hotels. The theoretical perspective underpinning this research is firstly presented with an explanation of related ontology and epistemological foundations. Further, justification of the chosen research design to achieve the research questions is explained. The research was implemented in two phases: a) scale development and validation; and, b) research model and hypotheses testing. These phases included qualitative and quantitative studies. The research phases and the procedural details for the qualitative and quantitative studies are discussed followed by an explanation of the data analysis techniques used. Finally, considerations of the ethical issues related to this research are illustrated.

3.2 Research Design

This study aims to understand significant beliefs and constructs underlying travellers' choices in consideration of staying at green hotels. Adopting a philosophical orientation is significant as many scholars have stressed the philosophical implications on methodological decisions taken during the research process (Denzin & Lincoln, 2011; Mertens, 2014; Tracy, 2013). Therefore, it is crucial to identify the philosophical stance and theories guiding and underpinning the research instead of simply explaining the study methods (Mertens, 2014).

This research was based on an objective ontology with a post-positivist epistemological approach. The researcher aimed to identify the driving factors for travellers' adoption of pro-environmental behaviour. This study begins with the theory's base and expands on the TPB constructs with the aim of collecting data to verify the relationships between these constructs.

Qualitative and quantitative approaches were used to ascertain the beliefs and direct constructs that induce travellers' intentions towards staying at green hotels, following an objectivist epistemology approach (Guba & Lincoln, 1994). First, the qualitative approach presents in-depth empirical information which will facilitate the development of the quantitative survey instrument (Ajzen, 1991; Creswell & Creswell, 2018; Fishbein & Ajzen, 2010). According to Tashakkori and Teddlie (2003), when combining quantitative and qualitative methods, decision rules related to the dominance of qualitative and quantitative approaches and the sequence of the two approaches should be determined. The research followed the (Qual → QUAN) decision rule meaning that the qualitative data collection was conducted in the preliminary phase followed by the quantitative; the uppercase denotes more priority will be given to the quantitative component (Ajzen, 1991; Creswell & Creswell, 2018; Fishbein & Ajzen, 2010). Before developing the survey instrument, an initial qualitative approach included three focus group sessions and empirical material from open-ended questionnaires. A structured online survey instrument was developed based on the results of the qualitative study to gather data from a sample of Australian travellers. An intervention using pictorial elements was embedded into the online survey instrument. These elements focused on either positively-framed images that evoked green hotels' environmental benefits or negatively-framed images that indicated environmental pollution. This enabled the investigation of the impact of these interventions on the research model. Figure 3.1 presents the research design followed in this study.

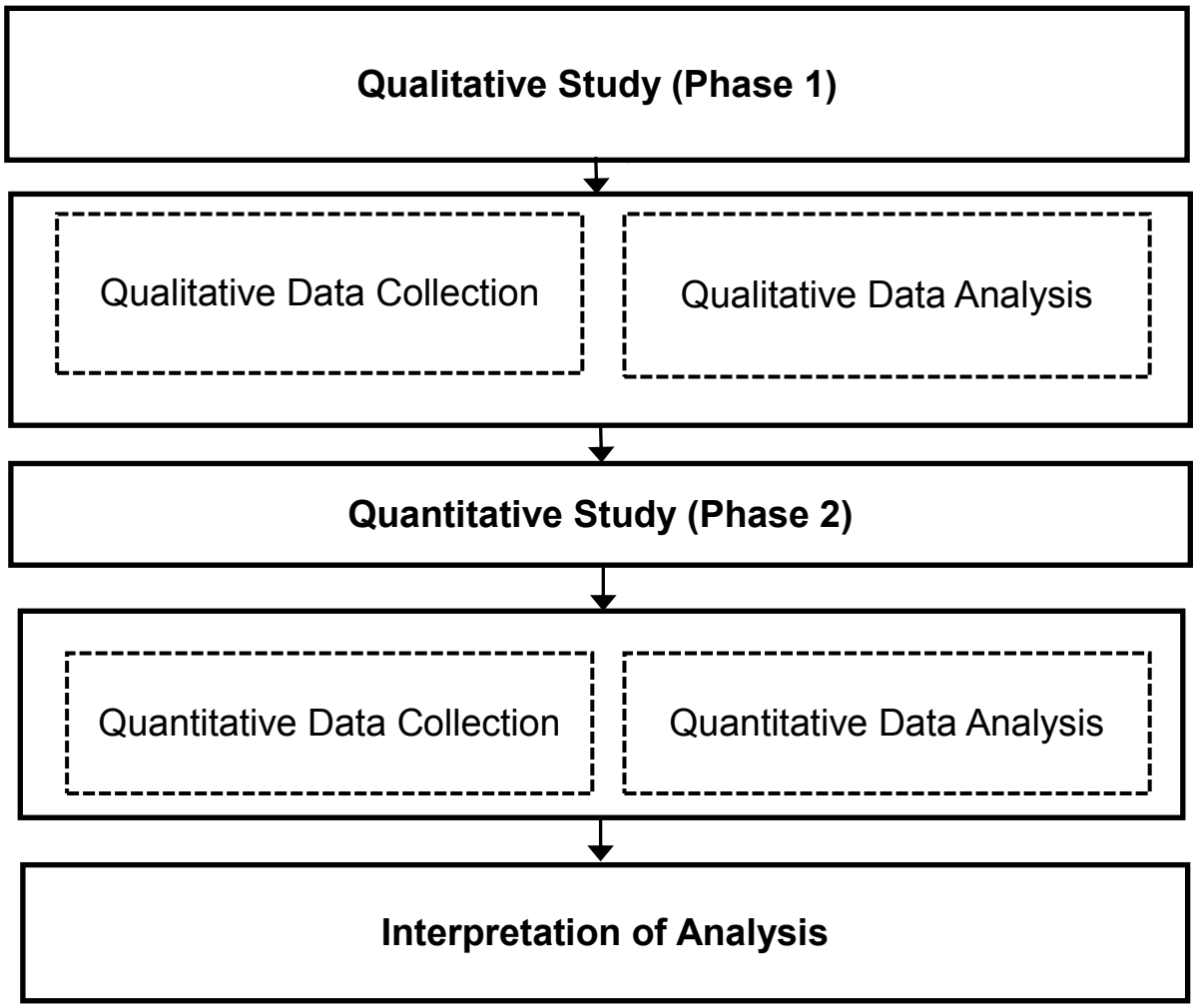


Figure 3.1 Research design

The procedures of this study were divided into two phases: a) Scale Development and Validation; and, b) Research Model and Hypotheses Testing. The overall flow of the two phases of the study, and the specific methods used for the qualitative study, survey methods, and sample design, are addressed in Sections 3.3 and 3.4. In the context of this study, a qualitative research method using an elicitation study was most suitable in order to identify beliefs and additional constructs to build the survey instrument and answer Research Question 1. Quantitative data methods were most suitable for answering Research Questions 2 to 10 since the aim was to examine how different constructs predict travellers' intentions in relation to staying at a green hotel and nine hypotheses were developed to answer these questions. Further, quantitative data were used to answer Question 11 of this study relating to using the intervention of positively

and negatively-framed messages. Figure 3.2 presents the overall steps taken through each phase of the research.

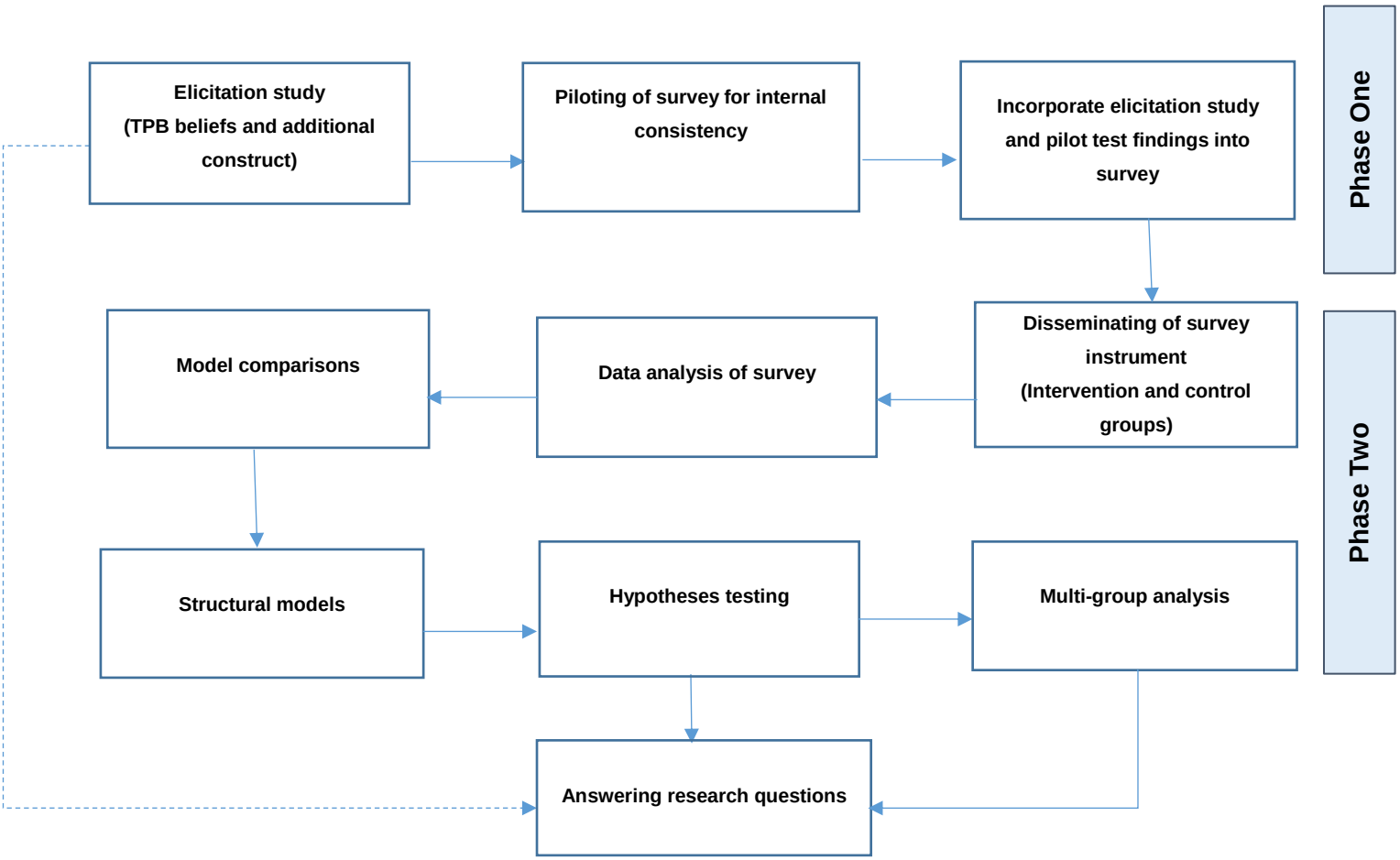


Figure 3.2 Research phases

3.3 Phase One: Scale Development and Validation

The first phase, scale development and validation, was undertaken to create an instrument suited to measure travellers' intentions to stay at green hotels. Based on existing measurement scales in consumer behaviour (De Leeuw et al., 2015; Fishbein & Ajzen, 2010; Vazifehdoust et al., 2013), and hospitality and tourism (Chen & Peng, 2012; Han et al., 2010; Teng et al., 2015; Wang et al., 2018), and through an elicitation study, the research instrument was developed. This research followed Fishbein and Ajzen (2010) and Netemeyer, Bearden, and Sharma's (2003) recommendations for instrument design, starting by construct definition, followed by creating and judging measurement items, and conducting

studies to create and enhance the scale and, lastly, finalising the scale. Figure 3.3 presents these steps.

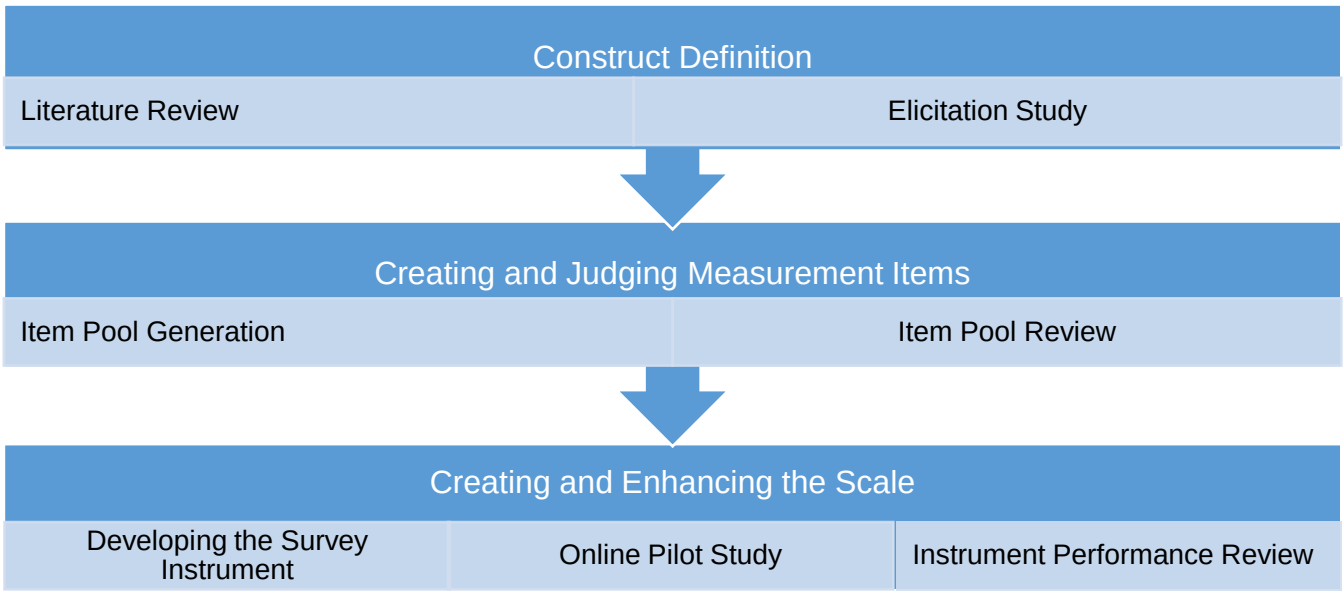


Figure 3.3 Phase one steps (scale development and validation procedure)

As the first step of scale development, literature search and an elicitation study through focus groups and open-ended questions were used to gain an in-depth understanding of the beliefs and any additional factors that impact Australian travellers' purchasing decisions of green hotel accommodation (Fishbein & Ajzen, 2010). A content analysis of the empirical material garnered from focus group transcripts and open-ended questions assisted in the construction of the study scale. This was followed by pilot testing of the scale as an item-trimming procedure (Netemeyer et al., 2003). The outcomes from this phase are presented in the Results Chapter in section 4.2.

3.3.1 Elicitation study

Following the recommendation of Ajzen (1991), and as justified under the 'belief elicitation' heading of the previous chapter (See section 2.3.1.2), an elicitation study using focus groups and an open-ended questionnaire was used to explore the beliefs of Australian travellers related to staying at green hotels (see Appendix A). A focus group is a research procedure that permits investigators to collect information through group interaction (McGehee & Santos, 2005). This method provides the benefit of gathering a number of research participants concurrently

and gathering information through understanding how they recognise a specific matter (Krueger & Casey, 2010; Siu, Lee, & Leung, 2013). However, Fishbein and Ajzen (2010) contend that this technique alone is not adequate, and add that salient beliefs should be elicited through a free-response format in which participants list the beliefs that come voluntarily to their mind. Therefore, in addition to focus groups, an open-ended questionnaire was also employed at the end of the focus group sessions.

Further, according to Krueger and Casey (2010), three to four groups are generally desired in order to achieve data saturation. This research involved three groups with a total of 15 participants during October 2016. The length of the sessions varied between 45 and 60 minutes. All participants were briefed about the purpose of the study at the start of the session and debriefed at the end of the session.

3.3.1.1 Focus group guide development

A semi-structured guide was prepared according to the TPB guidelines (Ajzen, 2017; Fishbein & Ajzen, 2010) to support the focus group discussions (see Appendix A). Questions were designed to encourage participants to deliberate matters related to staying at green accommodation such as benefits and concerns (behavioural beliefs), significant others who would support staying in a green hotel and who would themselves actually stay at such hotels (normative beliefs), and facilitators and barriers (control beliefs). Towards the end, participants were offered the opportunity to share new perceptions to gain detailed information about other aspects that would impact their green accommodation purchasing decisions.

3.3.1.2 Sampling and data collection for the elicitation study

This study aimed to identify a broad range of different beliefs about green hotels. Consequently, maximum variation sampling was applied (Patton, 2014). The sampling frame used in the elicitation study was Australian travellers who had spent at least one night in a hotel in the past year, and who were willing to stay at a green hotel in the near future. Participants were recruited via snowball

sampling (Patton, 2014). Active Australian travellers who are 18 years and older and representing different gender and professions were invited to participate in three focus groups. The researcher contacted the participants via telephone and invited them to participate in the focus group sessions. Following this, an information sheet was sent by email which also served as a reminder about the date and location of their focus group session.

The focus group discussions were facilitated by the researcher and audio recorded. As previously advised, open-ended questionnaires were given to the participants to document their personal beliefs in a free response format (Ajzen, 2017; Fishbein & Ajzen, 2010) (Appendix B). The participants were asked to list their thoughts regarding behavioural beliefs related to benefits and concerns; injunctive normative beliefs about those who would support and not support; descriptive normative beliefs about those who would stay or not stay; and the facilitators and barriers to staying at a green hotel. Lastly, participants were asked to add any other elements that would impact their decision to stay at a green hotel in the future.

3.3.1.3 Elicitation study analysis

Recordings of participants' replies were transcribed verbatim directly after each focus group session and then assessed using thematic content analysis as suggested by Fishbein & Ajzen (2010). Initially, a content analysis of the responses to the open-ended questionnaires was conducted using NVivo 10 software. As recommended by Fishbein and Ajzen (2010), descriptive categories were identified and systematically coded for each of the TPB belief elements and additional factors. Subsequently, a frequency count was performed, and the concepts were then arranged in descending order. Secondly, the analysis also weighed the level to which participants elaborated upon the matter in their discussion using the sessions' transcriptions. The findings of the coding process were revised by three researchers, as recommended by Siu et al. (2013), to enhance the reliability of the codes. The findings of the elicitation study were then used as a base for the development of the measurement scales designed for use in the pilot study, which is described in the following section. The details of the findings of the elicitation study are discussed in section 4.2 of the results chapter.

3.3.2 Survey instrument development

The survey instrument was established based on extensive literature review and the findings from the elicitation study. The survey included the behavioural, normative and control beliefs which were identified through the elicitation study. Section 3.3.2.1 discusses the operationalisation of these beliefs. Further, the survey incorporated the original constructs of TPB (attitude, subjective injunctive and descriptive norms, perceived behavioural control and intention). The items for these constructs were extracted through a comprehensive review of published scales in the areas of marketing and hospitality and tourism literature (see section 3.3.2.2). Subsequently, the additional construct of green hotel knowledge was identified through the elicitation study, and incorporated into the survey. The scale of this construct was also built after a thorough review of the literature (Section 3.3.2.3).

This study used a seven-point Likert scaling format which is widely used for measuring constructs in both behavioural and marketing research (Dawes, 2008). Ajzen (2017) states that most researchers working with TPB use a seven-point scale. In their study, Rhodes, Hunt Matheson, and Mark (2010) compared between five-point and seven-point Likert scales using TPB and reported that the seven-point Likert format had the highest overall reliability. Based on that, a decision was taken to use a seven-point Likert scale.

3.3.2.1 Beliefs operationalisation

As discussed in Section 2.3.1.1, TPB distinguishes three types of salient beliefs: behavioural beliefs providing the basis for attitudes toward the behaviour, normative beliefs which constitute the underlying determinants of social pressure and behaviour, and control beliefs which are assumed to influence perceptions of behavioural control. Fishbein and Ajzen's (1975) expectancy-value model was used to operationalise these beliefs.

Behavioural beliefs (BB) are assumed to be the basis of attitudes, as they refer to the perceived positive or negative outcomes of conducting the behaviour. Based on the expectancy-value model, behavioural beliefs are assumed to reflect

a combination of the strength of beliefs identified in the elicitation study and the individual's evaluation of the outcome of those beliefs (Ajzen, 1991; Fishbein & Ajzen, 1975). The strength of each belief identified in the elicitation study (Bb) was assessed on a seven-point scale ranging from (1) 'strongly disagree' to (7) 'strongly agree'. Outcome Evaluation (OE) was assessed on another seven-point scale ranging from (1) 'Definitely unimportant' to (7) 'Definitely important' (see Appendix E for detailed questionnaire).

Injunctive normative beliefs (INB) reflect perceptions of significant individuals or groups who would support or not support the performance of specific behaviour (Ajzen, 2017; Fishbein & Ajzen, 2010). Following upon the expectancy-value model, injunctive normative beliefs are assumed to reflect a combination of the likelihood that significant referents would or would not support conducting a given behaviour, and the person's motivation to comply (in) with those referents (Ajzen, 1991). Injunctive normative beliefs (INb) were operationalised by assessing the likelihood that significant others identified through the elicitation study would expect individuals to stay at a green hotel when travelling. All items were assessed on a seven-point scale ranging from (1) 'strongly disagree' to (7) 'strongly agree'. Motivation to comply (MC) was operationalised by asking how willing are they to comply with what each referent expected them to do on a seven-point scale ranging from (1) 'definitely false' to (7) 'definitely true'.

Descriptive normative beliefs (DNB) reflect perceptions concerning significant referents' own behaviour (De Leeuw et al., 2015). According to the expectancy-value model, descriptive normative beliefs. DNBs are assumed to reflect a combination of the likelihood that important referents would actually perform a given behaviour and the person's identification with the referent in question (Ajzen, 2017; Fishbein & Ajzen, 2010). Descriptive normative beliefs (DNb) were operationalised assessing the likelihood that important referents identified in the elicitation study would stay at a green hotel when travelling. All items were assessed on seven-point scales ranging from (1) 'strongly disagree' to (7) 'strongly agree' (De Leeuw et al., 2015; Fishbein & Ajzen, 2010). Further, individuals' identification with referents (IR) was operationalised by asking if they considered these referents to be behavioural role models (De Leeuw et al., 2015;

Fishbein & Ajzen, 2010). All items were assessed on a seven-point scale: (1) ‘not at all' to (7) ‘very much'.

Control beliefs (CB) refer to the perception of the existence or lack of resources and opportunities required to engage in a specific behaviour (Ajzen, 1991; Fishbein & Ajzen, 2010). According to the expectancy-value model, control beliefs are assumed to reflect a combination of the strength of these beliefs and one's evaluation of the perceived power of that belief creating the belief-based measures. The strength of control beliefs (Cb) identified in the elicitation study has been assessed on a seven-point scale ranging from (1) ‘strongly disagree' to (7) ‘strongly agree'. Further, the perceived power (PP) for each belief was assessed on a seven-point scale ranging from (1) ‘strongly disagree' to (7) ‘strongly agree'.

3.3.2.2 Original constructs operationalisation

Attitude (ATT) represents the overall assessment of a certain behaviour (Ajzen, 1991; Ajzen, Czasch, & Flood, 2009). According to Fishbein and Ajzen (2010), the semantic differential can be used to assess attitudes towards behaviour. A direct measure of attitudes was obtained using seven bipolar adjective pairs on semantic differential scales. The adjective pairs were ‘good-bad', ‘desirable-undesirable', ‘positive-negative', ‘enjoyable-unenjoyable', ‘favourable-unfavourable', ‘wise-foolish, and ‘pleasant-unpleasant' as items to measure attitude (Fishbein & Ajzen, 2010; Han et al., 2010). Each item was measured on a seven-point scale ranging from (1) to (7).

Subjective injunctive norms (SIN) reflect individuals' perceptions of what important referents think they should do (Ajzen, 2017; Fishbein & Ajzen, 2010). The SIN were measured with three items "most people who are important to me think I should stay at a green hotel when travelling", "most people who are important to me would want me to stay at a green hotel when travelling", and "people whose opinions I value would prefer that I stay at a green hotel when travelling" (Ajzen, 2017; De Leeuw et al., 2015; Fishbein & Ajzen, 2010; Han et al., 2010). All items were measured on a seven-point scale ranging from (1) ‘strongly disagree' to (7) strongly agree'.

Subjective descriptive norms (SDN) reflect individuals' perceptions concerning significant referents' own behaviour (De Leeuw et al., 2015). Two items "most people who are important to me will stay at a green hotel when travelling", and "most people whose opinions I value will stay at a green hotel when travelling" were used to obtain a direct measure of SDN (Fishbein & Ajzen, 2010). The items were measured on a seven-point scale ranging from (1) ‘strongly disagree' to (7) strongly agree'.

Perceived behavioural control (PBC) refers to individuals' perception of the potential difficulties and obstacles of performing a given behaviour (Ajzen, 1991). Three items "whether or not I stay at a green hotel when travelling is entirely my decision", "I am confident that if I want, I can stay at a green hotel when travelling", and "I have resources, time, and opportunities to stay at a green hotel when travelling" were used to assess PBC (Ajzen, 2017; Fishbein & Ajzen, 2010; Kim & Han, 2010). All items were measured on a seven-point scale ranging from (1) ‘strongly disagree' to (7) strongly agree'.

Intention (INT) or readiness to perform the behaviour is considered the central construct in the TPB model (Ajzen, 1991). Intention to stay was evaluated through three items "I am willing to stay at a green hotel when travelling.", "I plan to stay at a green hotel when travelling", and "I will make an effort to stay at a green hotel when travelling" (Ajzen, 2017; Fishbein & Ajzen, 2010; Han et al., 2010). These items were measured on a seven-point scale ranging from (1) ‘strongly disagree' to (7) ‘strongly agree'.

3.3.2.3 Green hotel knowledge operationalisation

Green hotel knowledge (GHK) reflects general knowledge regarding the influence of hotels on the environment (Chen & Peng, 2012; Vazifehdoust et al., 2013). Green hotel knowledge emerged as an additional construct from the elicitation study as most participants stated that their lack of awareness and knowledge regarding environmental programmes implemented in green hotels impeded their decision to stay at such hotels. Three items "compared to an average person, I am familiar with hotels' environmental policies", "compared to my friends, I am familiar with hotels' green programmes", and "compared to people who travel a

lot, I am familiar with hotels' green labels" were used to obtain a measure of GHK (Chen & Peng, 2012; Hu et al., 2010). The items were assessed on a seven-point scale ranging from (1) ‘strongly disagree' to (7) ‘strongly agree'.

3.3.3 Intervention development

As mentioned in Section 2.4.1, effective intervention in the TPB framework should be directed at the whole TPB model including salient beliefs as variations in these factors should generate changes in intentions (Ajzen, 2017; Fishbein & Ajzen, 2010). Pictorial elements using positive and negative framing were employed to explore participants’ responses to these images. These images were not advertisements; rather a research device used to examine different responses during the research process (Previte et al., 2015).

In this research, the range of images positioned green hotels against their positive impacts and the negative consequences of pollution on the environment. The study design incorporated two steps for the intervention development: image selection through focus groups, and incorporating the images into the survey instrument (MacKay & Fesenmaier, 1997). Four images showing the positive impacts of hotels on the environment (including Hilton and Starwood hotels) and four images showing the negative impact of pollution were chosen by the researcher and presented separately to the focus group participants. The participants in the three focus groups were requested to nominate two images that were highly representative of the positive impacts of hotels on the environment and two images related to the negative impacts of pollution on the environment. Following the focus group sessions, the images that received that highest ranking were incorporated into the online survey. The first positive image that was selected compared the annual reduction in resource usage between a green and a non-green hotel. The second positive image showed the Hilton group’s efforts to be green (Figure 3.4).

Figure 3.4 Positive images used in the survey

As for the selected negative images, the first image relates to pollution occurring on the beaches of Sydney from plastic waste, the second negative image portrays visible air pollution in Brisbane (Figure 3.5).


Pollution in Sydney Beaches


Air Pollution In Brisbane City

Figure 3.5 Negative images used in the survey

3.3.4 Pilot study

An online pilot study was performed to examine the psychometric qualities of the TPB constructs and the clarity and accuracy of individual questions, especially questions relating to the elicited beliefs from the focus groups (Ajzen, 2017; Fishbein & Ajzen, 2010). According to Netemeyer et al. (2003), such studies can assist in refining the measuring instrument. A survey instrument using Qualtrics™ was constructed for the pilot study. Qualtrics™ software was utilised to furnish the survey and improve the ease and speed of completing the survey. Also, four open-ended questions were added to the survey asking participants to suggest how the survey could be further improved (Bolton, 1993). A convenience sampling method was used in the pilot test to recruit participants. The pilot survey was distributed by email to postgraduate students and general staff members and researchers at Griffith University. In total, approximately 1000 emails were sent, and a total of 102 responses were gathered and used for data analysis (10.2 per cent response rate).

To assess the questionnaire's internal consistency, exploratory factor analysis (EFA) was conducted to check whether each variable was valid for measuring a single underlying factor of proposed constructs of the theory. As a result, some measurement items were identified as multidimensional or not significant for measuring the proposed construct, given their cross-loadings with multiple underlying factors or a corrected item-total correlation below 0.3 (Kline, 2015). Based on the results of the EFA, measurement items that had cross-loadings or low loadings were eliminated (Field, 2018). Following the EFA, reliability tests on each dimension of the constructs were run using Cronbach's alpha coefficient. For the pilot study, all constructs showed a Cronbach's alpha of 0.7 or above.

Following the statistical analysis, and after checking the participants' comments and feedback from the pilot study, a review by two panels of experts was conducted as suggested by Netemeyer et al. (2003). The panel assisted in the rewording of constructs to increase clarity of meaning in addition to conducting an initial assessment of the content validity (DeVellis, 2016; Field, 2018). The panel also suggested adding one item "friends" to the normative referents as they thought this referent group affects behavioural intentions. This item has been

examined in similar studies in the green hotel context that used "friends" as a referent group (Han et al., 2010; Kim & Han, 2010).

3.4 Phase Two: Research Model and Hypotheses Testing

Testing the model and hypotheses of the study was carried out in the second phase. A quantitative study was conducted to identify the main factors that trigger Australian travellers' intentions to stay at green hotels. During this phase, the study examined the psychometric properties of the scale and compared between different TPB models. In addition, the hypothesised relationships shown in the framework in the literature review chapter (see Section 2.6) were examined. Further, the collected data enabled the examination of the effect of the intervention to show differences in the influence of the positive and negative pictorial images on travellers' responses and their willingness to stay at green hotels (see Figure 3.6). The following section discusses the steps followed in the quantitative online study and presents the major analytical techniques used in the quantitative study.

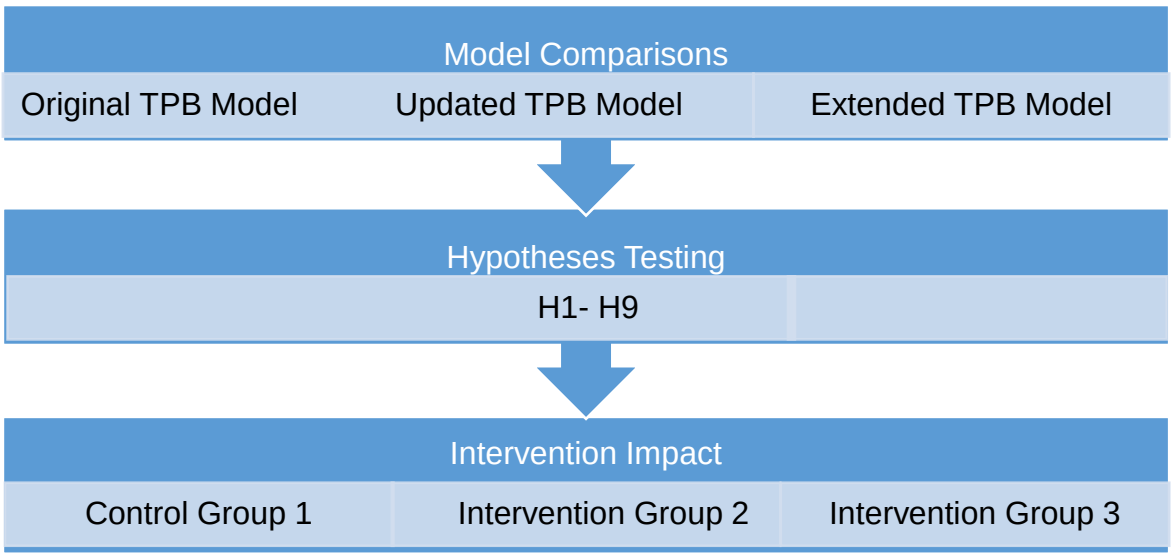


Figure 3.6 Phase two steps

3.4.1 Quantitative online survey

Following the refinements from the pilot study and the expert panel review, the final survey was constructed. The procedures selected to implement the main survey were similar to those used in the pilot study. The survey was designed in three versions to incorporate the different interventions. The first version included the control survey without any pictorial elements. The second version included two positive images about green hotels' impact on the environment where each image was used repetitively on each page of the survey. The third version included two negative images of environmental pollution incorporated in the same manner where each image was used repetitively on each page of the survey.

3.4.1.1 Sampling for online survey

This study intended to identify the major factors that influence Australians' decisions to stay at green hotel accommodation. Therefore, the target population for this study was Australian travellers who are willing to stay at a green hotel in the near future. This study employed a convenience sampling method where the survey was randomly distributed to the study population of Australian travellers using Qualtrics™ online survey software. According to Butcher and Heffernan (2006), this technique is commonly used in social sciences. Moreover, Malhotra, Hall, Shaw, and Oppenheim (2006) indicate that it is considered to be time- and cost-effective in comparison with other techniques. Yet, Malhotra et al. (2006) also indicate that by using convenience sampling, potential biases might occur. Therefore, in order to minimise the biases, subjects were randomly allocated to either the control or one of the two ‘intervention' groups without being informed that they were taking part in an ‘intervention' study.

The sample size was estimated based on the requirements of SEM data analysis methods (Hair, Black, Babin, & Anderson, 2010), and authors argue that a 10:1 criterion (ratio of participants to items) is the more acceptable sample size. This sample size (815) exceeds the requirement suggested by Hair et al. (2010) of around ten observations per parameter estimated since the number of measurement items for the main survey was 53.

3.4.1.2 Data collection procedure

As the aim of this study was to obtain comprehensive data on what impacts Australian travellers' decisions regarding staying at green hotel accommodation, an online survey was used as it was considered to be particularly valuable due to the greater opportunity of targeting a population of potential travellers. Some of the advantages of employing online surveys include random selection of individuals, speed of response and convenience of having automated data collection (Van Selm & Jankowski, 2006; Wright, 2005). According to Evans and Mathur (2005), online surveys can assist in obtaining information from participants living in different geographic locations and are also considered cost- and time-efficient. They also minimise the period taken to distribute surveys in the field and for data collection (Evans & Mathur, 2005; Van Selm & Jankowski, 2006). Online surveys are also considered to be more convenient as participants can answer at a time and location that suit them (Evans & Mathur, 2005; Van Selm & Jankowski, 2006).

Data were collected from Australian travellers using an online panel provided by Qualtrics™, a global market research firm. Online panel data has become commonplace in hospitality research, and several researchers have found such data to be reliable with no bias in responses (Han, 2015; Jordan et al., 2017; Yadav et al., 2018). Qualtrics™ was selected on the basis of its research experience, reputation and ability to reach the target market. Additionally, Qualtrics™ ensured a variety of participants in terms of demographics by distributing the surveys across the country and to different age groups.

The research firm sent an email invitation to Australian panels and asked two screening questions to ensure only Australian travellers participated and that they had an intention to stay at a green hotel in the near future. As a result, only qualified participants were invited to start the surveys. Subsequently, the participants were asked to commit to thoughtfully provide their best answers to each question in the survey. Additionally, one control question was added in the middle of the survey.

The questionnaire was distributed to 7,600 Qualtrics™ panel members, and 815 completed questionnaires were received (10.7 per cent response rate). Response rate aligns with online surveys' response rate in general (Jin, 2011; Manfreda, Berzelak, Vehovar, Bosnjak, & Haas, 2008), and in the green hotels' context specifically (Han, 2015; Han et al., 2010). During the period of data collection, Qualtrics™ allowed the researcher to check the responses at any time. The online survey was conducted from 9th May 2017 until 31st May 2017. Following the closure of the online survey, Qualtrics™ software permitted the researcher to directly download the data into SPSS file format.

3.4.2 Analysis of quantitative data

This section presents an explanation of the analysis process of the quantitative research data. Two major tasks were undertaken prior to hypothesis testing. The data were first screened to identify missing values and potential outliers. Second, some preliminary tests were conducted to ensure the normality of the data. Consequently, major analytical techniques were used in this research to (1) develop and refine item scales, (2) compare between different models, (3) test the hypotheses, and, (4) test the impact of the intervention and (5) test the impact of the demographic variables. Explanatory factor analysis (EFA) was used to develop and refine scales in both the pilot and main study. Further, a two-step approach was implemented starting by confirmatory factor analysis (CFA) followed by structural equation modelling (SEM). Structural Equation Modelling was then used for model comparison and hypothesis testing. Further, a multi-group analysis and ANOVA tests were performed to test the differences between the three groups. Finally, ANOVA tests were performed to test the effect of demographic variables. The data analyses were conducted using SPSS and AMOS 22. Data preparation is presented next followed by the discussion on each analytical technique.

3.4.2.1 Data preparation

The initial data file received from Qualtrics™ passed through a rigorous screening process to ensure that the data were entered correctly and missing data and outliers were identified (Pallant, 2016). Firstly, the coding of the variables was

examined. Then, any survey that was filled in less than five minutes was excluded (Litwin & Fink, 1995). Additionally, any survey that had the same response for many consecutive items was rejected (Meade & Craig, 2012). In the data set, 29 surveys were filled in less than five minutes, and five had the same responses. Accordingly, 34 responses (4.1 %) were considered unacceptable and eliminated.

3.4.2.2 Preliminary tests

Once the initial data screening process had been conducted, further preliminary tests were completed on the retained data set which included normality and multicollinearity tests. The normality of the data was examined to ensure the normal distribution of the data set before conducting SEM (Schumacker & Lomax, 2016). According to Chatfield and Collins (1995), analysis of normality should include two types, namely univariate and multivariate. Starting with univariate normality, it can be identified using skewness and kurtosis. For the full data set (Table 3.1) and the three groups (Table 3.2), the skewness and kurtosis values were well within the standard guidelines as indicated by Hair et al. (2010) (maximum acceptable values up to ±1 for skewness and up to ±3 for kurtosis. The skewness values for the sample ranged from 0.015 to 0.844 and the kurtosis ranged from 0.066 to 0.959, showing that the data quality is excellent under such criteria. Moreover, histograms were checked for normal distribution of the data set. Scores of the histograms appeared to be reasonably normally distributed.

Table 3.1

Skewness and Kurtosis Analysis

Indirect Measures		Skewness Statistic	Std. Error	Kurtosis Statistic	Std. Error	Comments about Skewness	Comments about Kurtosis
Behavioural Beliefs	Bb1: I would help to protect the environment.	-.493	.090	.620	.179	Acceptable	Acceptable
	Bb2: I would contribute to fulfilling my environmental obligations.	-.375	.090	-.209	.179	Acceptable	Acceptable
	Bb3: I would assist in securing a future for next generations.	-.271	.090	-.465	.179	Acceptable	Acceptable
	Bb4: I would be able to experience a healthy environment.	-.427	.090	.282	.179	Acceptable	Acceptable
	Bb5: I wouldn't be compromising on comfort.	-.443	.090	-.807	.179	Acceptable	Acceptable
Outcome Evaluation	OE1: Helping to protect the environment is	-.378	.090	-.930	.179	Acceptable	Acceptable
	OE2: Contributing to fulfilling my environmental obligations is	-.383	.090	-.561	.179	Acceptable	Acceptable
	OE3: Assisting in securing a future for next generations is	-.415	.090	-.633	.179	Acceptable	Acceptable
	OE4: Experiencing a healthy environment is	-.609	.090	-.112	.179	Acceptable	Acceptable
	OE5: Not compromising on comfort is	-.470	.090	-.471	.179	Acceptable	Acceptable
Injunctive Normative Beliefs	INb1: My family/ relatives think I should stay at a green hotel.	-.272	.090	-.303	.179	Acceptable	Acceptable
	INb2: The younger people I know think I should stay at a green hotel.	-.613	.090	-.287	.179	Acceptable	Acceptable
	INb3: My colleagues think I should stay at a green hotel.	-.620	.090	-.280	.179	Acceptable	Acceptable
	INb4: My friends think I should stay at a green hotel.	-.246	.090	-.216	.179	Acceptable	Acceptable
Motivation To Comply	MC1: I want to do what my family/ relatives think I should do.	-.123	.090	-.352	.179	Acceptable	Acceptable
	MC2: I want to do what the younger people I know think I should do.	-.526	.090	-.143	.179	Acceptable	Acceptable
	MC3: I want to do what my colleagues think I should do.	-.505	.090	-.145	.179	Acceptable	Acceptable
	MC4: I want to do what my friends think I should do.	-.126	.090	-.320	.179	Acceptable	Acceptable
Descriptive Normative Beliefs	DNb1: Most of my family/ relatives have stayed at a green hotel when travelling.	-.106	.090	-.186	.179	Acceptable	Acceptable
	DNb2: Most of the younger people I know have stayed at a green hotel when travelling.	.016	.090	-.457	.179	Acceptable	Acceptable

Table 3.1 *Continued*

		Skewness Statistic	Std. Error	Kurtosis Statistics	Std. Error	Comments about Skewness	Comments about Kurtosis
	DNb3: Most of my colleagues have stayed at a green hotel when travelling.	-.039	.090	-.265	.179	Acceptable	Acceptable
	DNb4: Most of my friends have stayed at a green hotel when travelling.	-.074	.090	-.131	.179	Acceptable	Acceptable
Identification with	IR1: I want to be like my family/ relatives.	.066	.090	-.270	.179	Acceptable	Acceptable
Referents	IR2: I want to be like the younger people I know.	-.015	.090	-.256	.179	Acceptable	Acceptable
	IR3: I want to be like my colleagues.	.058	.090	-.174	.179	Acceptable	Acceptable
Control Beliefs	IR4: I want to be like my friends.	.051	.090	-.223	.179	Acceptable	Acceptable
	Cb3: The hotel should have visible communications about its green practices.	-.844	.090	.221	.179	Acceptable	Acceptable
	Cb4: The hotel should participate in environmental certification and eco-labelling.	-.803	.090	-.066	.179	Acceptable	Acceptable
Perceived Power	PP1: If green hotels are expensive, this would make it more difficult for me to stay at one.	-.368	.090	-.753	.179	Acceptable	Acceptable
	PP2: If the green hotel's location is not convenient, this would make it more difficult for me to stay at one.	-.443	.090	-.807	.179	Acceptable	Acceptable
	PP3: If the green hotel doesn't have visible communications about its green practices, this would make it more difficult for me to stay at one.	-.352	.090	-.776	.179	Acceptable	Acceptable
	PP4: If the green hotel doesn't participate in environmental this would make it more difficult for me to stay at a one.	-.352	.090	-.776	.179	Acceptable	Acceptable
Direct Measures	ATT1 : Good	-.073	.090	-.693	.179	Acceptable	Acceptable
Attitudes	ATT2:Desirable	-.073	.090	-.693	.179	Acceptable	Acceptable
	ATT3: wise	-.073	.090	-.693	.179	Acceptable	Acceptable
	ATT4: favourable	-.158	.090	-.767	.179	Acceptable	Acceptable
	ATT5: positive	-.073	.090	-.693	.179	Acceptable	Acceptable
	ATT6: enjoyable	-.087	.090	-.754	.179	Acceptable	Acceptable
	ATT7: pleasant	-.073	.090	-.693	.179	Acceptable	Acceptable
Subjective Injunctive Norms	SIN1: Most people who are important to me think I should stay at a green hotel when travelling.	-.485	.090	.332	.179	Acceptable	Acceptable
	SIN2: Most people who are important to me would want me to stay at a green hotel when travelling.	-.644	.090	.333	.179	Acceptable	Acceptable
	SIN3: Most people whose opinions I value would prefer that I stay at a green hotel when travelling.	-.585	.090	.303	.179	Acceptable	Acceptable
Subjective Descriptive Norms	SDN1: Most people who are important to me will stay at a green hotel when travelling.	-.622	.090	.503	.179	Acceptable	Acceptable
	SDN2: Most people whose opinions I value will stay at a green hotel when travelling.	-.536	.090	.183	.179	Acceptable	Acceptable

Table 3.1 *Continued*

Direct Measures		Skewness Statistic	Std. Error	Kurtosis Statistics	Std. Error	Comments about Skewness	Comments about Kurtosis
Perceived Behavioural Control	PBC1: Whether or not I stay at a green hotel when travelling is entirely my decision.	-.156	.090	-.621	.179	Acceptable	Acceptable
	PBC2: I am confident that if I want, I can stay at a green hotel when travelling.	-.254	.090	-.587	.179	Acceptable	Acceptable
	PBC3: I have resources, time, and opportunities to stay at a green hotel when travelling.	-.213	.090	-.592	.179	Acceptable	Acceptable
Green Hotel Knowledge	GHK1: Compared to an average person, I am familiar with hotels' environmental policies.	-.358	.090	-.407	.179	Acceptable	Acceptable
	GHK2: Compared to my friends, I am familiar with hotels' green programmes.	-.465	.090	-.077	.179	Acceptable	Acceptable
	GHK3: Compared to people who travel a lot, I am familiar with hotels' green labels.	-.397	.090	-.386	.179	Acceptable	Acceptable
Intention to Stay	INT1: I am willing to stay at a green hotel when travelling.	-.481	.090	.055	.179	Acceptable	Acceptable
	INT2: I plan to stay at a green hotel when travelling.	-.389	.090	-.354	.179	Acceptable	Acceptable
	INT3: I will make an effort to stay at a green hotel when travelling.	-.401	.090	-.429	.179	Acceptable	Acceptable

Table 3.2

Skewness and Kurtosis Analysis- Three Groups

	CG (n=260)		PFI (n=260)		NFI (n=261)	
Measures	Skewness	Kurtosis	Skewness	Kurtosis	Skewness	Kurtosis
Bb1	-.201	.147	-1.127	3.107	-.262	-.758
Bb2	-.323	-.076	-.674	.719	-.272	-.919
Bb3	-.286	.259	-.513	-.465	-.131	-.914
Bb4	-.609	1.135	-.775	.553	-.392	.226
Bb5	-.736	-.638	-.389	-.559	-.280	-.812
OE1	-.017	-.460	-.745	-.628	-.658	-.416
OE2	-.274	-.015	-.609	-.242	-.507	-.699
OE3	-.309	.100	-.710	-.504	-.429	-.911
OE4	-.434	.408	-1.011	.586	-.704	-.076
OE5	-.747	-.464	-.535	-.237	-.182	-.378
INb1	-.566	-.329	-.521	-.177	.420	.595
INb2	-.586	-.378	-.711	-.092	-.525	-.390
INb3	-.586	-.378	-.704	-.141	-.634	-.365
INb4	-.498	-.143	-.520	-.066	.329	.566
MC1	-.375	-.208	-.328	-.158	.456	-.027
MC2	-.504	-.214	-.534	-.012	-.536	-.262
MC3	-.504	-.214	-.534	-.012	-.449	-.292
MC4	-.351	-.153	-.372	-.083	.457	-.005
IDb1	-.569	-.346	.025	.004	.395	.587
IDb2	-.589	-.392	.120	-.220	.622	.549
IDb3	-.511	-.360	.199	-.038	.278	.279
IDb4	-.504	-.158	-.014	.012	.315	.420
IR1	-.375	-.208	.252	-.013	.443	-.042
IR2	-.504	-.214	.183	.027	.326	.296
IR3	-.383	-.233	.189	.209	.461	.403
IR4	-.364	-.158	.253	-.147	.328	.148
Cb1	-.372	-1.234	-.276	-.546	-.280	-.812
Cb2	-.575	.127	-.888	.279	-.538	-.325
Cb3	-.789	-.286	-.972	1.463	-.802	-.157
Cb4	-.784	-.397	-.773	.423	-.768	-.395
PP1	-.480	-1.191	-.515	-.317	-.182	-.378
PP2	-.736	-.638	-.389	-.559	-.280	-.812
PP3	-.534	-.718	-.389	-.559	-.280	-.812
PP4	-.534	-.718	-.389	-.559	-.280	-.812
ATT1	-.218	.776	-.238	-.863	-1.049	.482
ATT2	-.218	.776	-.198	-.870	-.729	.279
ATT3	.079	-.429	.042	-.816	-.581	.047

Table 3.2 *Continued*

	CG (n=260)		PFI (n=260)		NFI (n=261)	
Measures	Skewness	Kurtosis	Skewness	Kurtosis	Skewness	Kurtosis
ATT5	-.218	.776	-.223	-.860	-.773	-.140
ATT6	-.218	.776	-.223	-.860	-.287	-.980
ATT7	-.218	.776	.042	-.816	-.319	-.977
SIN1	-.445	.749	-.601	.245	-.340	-.187
SIN2	-.482	.684	-.743	.277	-.577	-.022
SIN3	-.452	.519	-.747	.445	-.468	-.259
SDN1	-.667	.239	-.415	-.079	-.665	.577
SDN2	-.713	.391	-.370	-.364	-.558	.293
PBC1	.269	-.097	-.308	-.724	.050	-1.018
PBC2	.234	-.686	-.320	-.596	-.174	-.974
PBC3	.234	-.686	-.472	.133	.050	-1.018
GHK1	-.495	-.059	-.519	.339	.321	-.608
GHK2	-.563	.157	-.538	.690	.156	-.389
GHK3	-.516	-.161	-.487	.023	.260	-.440
INT1	-.551	.709	-.818	1.162	-.020	-.919
INT2	-.277	.148	-.735	.296	-.008	-.947
INT3	.021	-.199	-.887	.530	-.260	-.769

In regard to multivariate normality, it is a significant assumption associated with any structural equation modelling procedure and can be measured by Mardia's coefficient of multivariate kurtosis (Hair et al., 2010). For the initial multivariate Kurtosis, its value was 133.78 which was above the accepted level (-4.9 < Mardia's kurtosis < 49.1) (Curran, West, & Finch, 1996; Harlow, 1986). Lowering the multivariate kurtosis of the original raw data can be achieved through deleting outliers through their Mahalanobis distances (Hair et al., 2010). After ten outliers were deleted, the multivariate kurtosis dropped sharply from 133.78 to 45.98, suggesting that the data set is considered to follow the moderate multivariate normal distribution (Curran et al., 1996; Harlow, 1986).

The next preliminary test was conducted to assess multicollinearity of the data set. Multicollinearity exists in the presence of a strong correlation between two or more variables (Field, 2018). Multicollinearity was examined by checking the tolerance and VIF. The value of tolerance should be less than 0.2 and, simultaneously, if the value of VIF is 10 and above, then the multicollinearity is problematic (Field, 2018). The VIF values in the data set were all below 10 and the tolerance statistics all well above 0.2 as presented in Table 3.3; therefore, there was no collinearity within the data.

Table 3.3

Multicollinearity Statistics

Constructs	Collinearity Statistics	
	Tolerance	VIF
Behavioural Beliefs	.732	1.365
Injunctive Normative Beliefs	.187	5.346
Descriptive Normative Beliefs	.252	3.964
Control Beliefs	.980	1.021
Attitude	.860	1.163
Subjective Injunctive Norms	.331	3.025
Subjective Descriptive Norms	.346	2.888
Perceived Behavioural Control	.748	1.338
Green Hotel Knowledge	.745	1.343

Once the data had been checked, the next step was to calculate descriptive statistics by reporting the mean and the standard deviation for each item of the measurement scale for the total sample and the three groups separately. These results are presented in Section 4.3.2 in the results chapter.

The next step included calculating the belief-based measures. The expectancy-value model was used to obtain the scores for the four types of beliefs. For behavioural beliefs (BB), the strength of each behavioural belief was multiplied by the individual's overall evaluation of that belief (Bbi×OEi) (Ajzen, 1991; Fishbein & Ajzen, 2010). Each product was treated as an individual behavioural belief (BB). As for injunctive normative beliefs (INB), the strength of each injunctive belief was multiplied by the individual's motivation to comply with the referents' expectation (INbi×MCi). Subsequently, each product was treated as an INB (Ajzen, 1991; Fishbein & Ajzen, 2010). The same steps were followed for calculating the descriptive normative beliefs (DNB). The measure was obtained through multiplying the strength of each descriptive normative belief by the identification with referents (DNbi×IRi) and then treating each product as a DNB (Ajzen, 2017; Fishbein & Ajzen, 2010). Finally, control beliefs (CB) were calculated by multiplying the strength of each control belief by its corresponding perceived power (Cbi×PPi), and treating each product as an individual CB (Ajzen, 2017; Fishbein & Ajzen, 2010). The belief-base measures are presented in Section 4.3.3 in the results chapter.

3.4.2.3 Exploratory factor analysis (EFA)

Exploratory factor analysis (EFA) is an analytical technique used to refine the items used in the scales prior to using them in other analysis (Anderson & Gerbing, 1988; Pallant, 2016). One main use of this method is to decrease a data set to a further controllable size while maintaining as much of the original information as possible (Field, 2018). Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Barlett's Sphericity test should be checked to confirm whether the data was suitable for factor analysis (Hair et al., 2010; Pallant, 2016). If the value of KMO is above 0.6, and the Bartlett's Test of Sphericity shows significance, then the data set is suitable for a factor analysis (Hair et al., 2010). Once the previous assumptions are met, a suitable extraction and rotation method should be identified (Field, 2018; Hair et al., 2010).

Several extraction methods can be used in EFA, including principle axis factoring (PAF) which seeks to explain the set of correlations or covariances represented in the data and identify a data structure for later use in the confirmatory analysis (Hair et al., 2010). Field (2018) states that the PAF extraction method provides a statistical measure of the goodness of fit of the factor solution. In addition, Sparks, Butcher, and Bradley (2008) recommend using PAF for consumer behaviour research and elaborate that it is the most suitable method when developing factors for SEM. Consequently, for this thesis, both the pilot study and the main survey were conducted using PAF.

Following the selection of the extraction method, the most suitable rotation approach should be selected. There are two main types of rotation: orthogonal or oblique (Ferguson & Cox, 1993). Orthogonal rotation provides a simple structure by assuming that no correlation exists among the factors, whereas oblique rotation assumes that the extracted factors are correlated (Ferguson & Cox, 1993; Hair et al., 2010). Hair et al., (2010) elaborate that the oblique rotation identifies the extent to which each of the factors is correlated instead of randomly constraining the factor rotation to an orthogonal solution. According to the correlation results of the data set, the data matrix shows sufficient correlation, therefore the oblique rotation was used.

Additionally, the communality of items was considered. Communalities between items should be above .6 to retain the item (Field, 2018). Also, factor loadings were examined. According to Hair et al. (2010), items should be deleted if they fail to load at the designated 0.30 cut-off point. Following the EFA, reliability tests on each dimension of the constructs were run for internal consistency evaluation. Most studies have measured reliability using Cronbach's alpha coefficient (Nunnally & Bernstein, 1978). According to Nunnally and Bernstein (1978), the cut-off point for Cronbach's Alpha value should be .7 or above. The results for the EFA are presented in Section 4.3.4 in the results chapter.

3.4.2.4 Confirmatory factor analysis (CFA)

Confirmatory factor analysis (CFA) is used as a particular test of new data against established models (Ferguson & Cox, 1993). The process of CFA is viewed as crucial, as the factors and measurement items confirmed in this technique will be used as the foundation for the next step of data analysis to identify relationships between significant factors (Bryman & Hardy, 2009; Hair et al., 2010). The maximum likelihood method was used to evaluate the fundamental structure of the constructs in the model. Specifically, all measures were assessed for uni-dimensionality, reliability, and construct validity (Hair et al., 2010).

The CFA provides several model fit indices. Among these indices, Hair et al. (2010) suggest particular values to be reported to assess the model's goodness of fit. The first value reported should be the chi-square (x^2) and the associated degrees of freedom (df). Kline (2015) also recommends reporting the normed chi-square (NC) as this index reduces the sensitivity of x^2 to the sample size. The second value relates to an absolute fit index (i.e., RMSEA). The third value relates to an incremental fit index (i.e., CFI), and the fourth value relates to one goodness of fit model (TLI). To indicate a good model fit, the NC value should range between 2.0 and 5.0 indicating reasonable fit (Kline, 2015). Moreover, RMSEA should be between .03 and .08, and CFI and TLI should be above .9 (Hair et al., 2010). The results of the CFA are provided in Section 4.3.5 in the results chapter.

3.4.2.5 Construct and discriminant validity

When a measurement model has achieved an acceptable level of fit, then construct validity and reliability should be examined. This step is viewed as crucial prior to conducting tests of the relationships in a structural model (Hair et al., 2010). This study examined convergent and discriminant validity to achieve construct validity (Hair et al., 2010). Standard factor loading of the CFA model, average variance extracted (AVE) and composite reliability (CR) should be evaluated to assess convergent validity (Hair et al., 2010). In order to achieve convergent validity, the standard factor loading should be higher than .5 for each item; AVE value should be equal or exceed 50 per cent and CR, indicating the internal consistency of multiple indicators for each construct, should be above .7 (Hair et al., 2010). As for discriminant validity, it indicates the extent to which a construct is genuinely distinct from other constructs (Hair et al., 2010). AVE value for each construct should be compared with the squared correlation between constructs (Hair et al., 2010). All AVE values should be higher than the corresponding construct squared correlation indicating that discriminant validity was achieved (Hair et al., 2010). The results are reported in Section 4.3.5 in the results chapter.

3.4.2.6 Structural equation modelling

Structural equation modelling (SEM) is a multivariate technique that allows the researcher to concurrently study a group of interconnected relations between the measured constructs and latent variables along with the relations between different latent constructs (Hair et al., 2010). A structural model embodies a theory with a group of structural equations and is portrayed with a graphic diagram (Hair et al., 2010). In the previous chapter, relationships among variables were discussed, and the research model was conceptualised based on the TPB framework (see Section 2.6).

Prior to testing the structural model, model comparisons were performed. According to Hair et al. (2010), this should be based on comparing the estimated model with different models through overall model comparisons. The three models (i.e., TPB, updated TPB, and extended TPB models) were independently

tested. As mentioned in the literature review, in the TPB model, intention is the proximal predictor of behaviour and can be determined by the interaction of three distinct factors, namely: attitudes, subjective norms, and perceived behavioural control. The updated TPB model included intentions, attitude and perceived behavioural control and divided the subjective norms into subjective injunctive norms and subjective descriptive norms as recommended by Fishbein and Ajzen (2010). The extended model included all the TPB constructs (including subjective injunctive norms and subjective descriptive norms) in addition to green hotel knowledge. Green hotel knowledge has been suggested from the results of the elicitation study as an additional factor that would impact behavioural intentions.

To assess model fit, the same set of criteria used for CFA models was used for comparing the three models. The model with the best fit in addition to the best explanatory power was accepted and used for hypotheses testing. The results of the structural modelling comparison are reported in Section 4.3.6 in the results chapter. After finding the best-fitting model, SEM was used to test causal relationships. This was conducted to achieve research questions two to 10. In this step, the path estimates between the latent constructs were required to be significant at the $p < .05$ level (Hair et al., 2010). The coefficient and the critical ratio (C.R. = t-value) were reported. The impact of each construct was evaluated using Hopkins' (1997) guidelines. The guidelines for interpreting the coefficient value are: 0.0-0.1 minimal effect, 0.1-0.3 small effect, 0.3-0.5 moderate effect, 0.5-0.7 large effect and .7 and above is very large effect (Hopkins, 1997).

3.4.2.7 Multi-group analysis and ANOVA tests

After model testing and selection, a multi-group analysis using AMOS was executed to seek evidence of the intervention effects across the three sample groups (Hair et al., 2010). This was conducted to achieve research question 11. A Stats Tool Package was used to investigate the differences between the three groups (Gaskin, 2016) based on the conceptual framework for testing hypotheses discussed in Chapter Two (Section 2.6). Hair et al. (2010) state that the chi-square difference test is the empirical means to assess if between-group constraints are statistically significant. Firstly, construct composites in the TPB model were included instead of the individual parameters as the data set for each

group was not sufficent to permit reliable assessment of all parameters of the model (De Leeuw et al., 2015). Subsequently, the factor loadings between the three models were examined to provide a more precise estimate of the difference in the nature of the relationships between the three groups (Hair et al., 2010). Finally, each specific parameter of interest in the three models was constrained to be equal between groups to compare chi-square difference for this parameter in the three models (Hair et al., 2010).

Following that, ANOVA and post-hoc analysis tests were conducted to examine participants' responses. To interpret the results of ANOVA, the F-value of the main and interaction effects of each manipulation, together with the degree of freedom should be reported (Field, 2018). Furthermore, the effect size for ANOVA results was calculated. The effect size statistics provide an indication of the magnitude of the differences between the groups and that the difference obtained was unlikely to occur by chance (Pallant, 2016). The most commonly used statistic for measuring the different effect size is eta squared and Cohen's d (Field, 2018; Pallant, 2016). Eta squared represents the proportion of variance in the dependant variable that is explained by the group variable (Pallant, 2016). The guidelines for interpreting this value are: 0.01 small effect, 0.06 moderate effect and .14 large effect (Cohen, 1988). A clear account of the results of the multi-group analysis is discussed in the results chapter (See Section 4.3.8.2).

Finally, in order to examine the impact of demographic characteristics, t-test and ANOVA were used to test if intention to stay at a green hotel (INT) differs significantly among these different groups.

3.5 Ethical Considerations

This study has complied with the ethical guidelines of Griffith University with respect to the conduct of research (Ethics reference number GU 2016/577). Neuman and Kreuger (2011) indicate that ethical research enables the researcher to contribute to knowledge without harming human subjects participating in research. Ethical approval was given by the Griffith University Human Research Ethics Committee for both the qualitative and quantitative studies. Participation in focus group sessions and surveys was voluntary, and all

information provided was treated as confidential. Participants were notified that they can withdraw from the research process at any time.

In preparation for the focus group sessions, the researcher forwarded an information sheet to each participant (Appendix C). Before starting each session, the participants signed a consent form. The participants in the pilot study and the main study were provided with an information sheet of the research (See Appendix D for the pilot study and Appendix E for the main study). The information sheet included an invitation to the participants with a brief description of the purpose of the research.

3.6 Chapter Summary

This chapter has provided an explanation of the underpinning philosophical approach, study design, phases and procedures of this research. Overall, two stages of research were undertaken, and the use and appropriateness of methods for each stage were justified. Based on TPB, and following the elicitation study, a survey was created, reviewed and piloted for validity and reliability. The final survey was distributed online through Qualtrics™, and the resulting data were analysed using SPSS and AMOS statistical software. Finally, ethical considerations of the present study were addressed. The next chapter reports the results of the analysis steps outlined above.

CHAPTER 4

RESULTS

4.1 Chapter Introduction

The previous chapter explained the research methodology, how data were gathered, and the procedures used to analyse the data. Major tasks related to scale development, survey design, intervention development, data collection, analytical techniques applied and ethical considerations were discussed. This chapter presents the results of the analysis of the research data in the qualitative and quantitative research studies. First, this chapter will present the findings from the elicitation study and the pilot study, which were used to build the research survey instrument. This will be followed by presenting the results of the quantitative study through structural equation modelling (SEM) and hypotheses testing. Finally, the results of the intervention effect followed by the demographic effects are presented.

4.2 Elicitation Study

The elicitation study aimed to ascertain beliefs and additional factors that affect travellers' decision-making processes regarding green hotel accommodation using the framework of the theory of planned behaviour (TPB). Focus groups and open-ended questionnaires were employed to gain an in-depth understanding of the beliefs of Australian travellers. Information from focus group discussions and open-ended questionnaires were used to develop the measurement scales and build the survey instrument. The results associated with the elicitation study are detailed in the following sections.

4.2.1 Participants profile

The elicitation study included three groups with a total of 15 participants who ranged in age, gender and profession. Australian active travellers who are 18 years and above were asked to participate in these sessions through snowball

sampling. These participants indicated that they have stayed in a hotel in the past six months and are willing to stay at a hotel in the coming six months.

Of the 15 participants, eight were females, and seven were males which provides an approximate balance between males and females in the sample. As illustrated in Table 4.1, the majority of participants (eight participants) were aged above 50 years old indicating they were capable of engaging in the discussion due to their life experiences. The next largest group (four participants) were aged between 25 and 34. The final part of Table 4.1 lists a selection of the participants' employment. According to the participants, approximately 65% indicated that they had stayed at a green hotel, about 35% were not sure whether they had stayed at a green hotel or not.

Table 4.1

Socio-Demographic Composition of the Sample (N=15)

		N
Gender	Female	8
	Male	7
Age	18 to 24 years old	1
	25 to 34 years old	4
	35 to 50 years old	2
	Over 50 years old	8
Profession	Administrative worker	1
	Clerical worker	1
	Community and personal service	2
	Technicians and trade worker	3
	Sales worker	1
	Professional	2
	Retired	3
	Home duties	1
	Student	1

4.2.2 Findings of the elicitation study

The theory of planned behaviour differentiates between three types of salient beliefs: behavioural beliefs, normative beliefs, and control beliefs (Fishbein & Ajzen, 2010). These beliefs are known as the indirect constructs of the theory (Fishbein & Ajzen, 2010). Behavioural beliefs institute the fundamental elements of attitudes towards the behaviour, normative beliefs are expected to affect social norms, and control beliefs provide the foundation for perceived behavioural control (Ajzen, 1991). This study successfully elicited salient beliefs about staying at a green hotel and exposed important aspects regarding additional elements affecting travellers' intentions to stay at such hotels. The content analysis identified the classifications based on the TPB constructs. For the behavioural beliefs, six dimensions emerged. For descriptive normative beliefs, participants identified three groups as referents. As for the control beliefs, four major beliefs were identified. Finally, the participants identified green hotel knowledge as an additional determinant that affects travellers' decisions to stay at a green hotel. Table 4.2 provides a summary of the key beliefs (including the number of times a belief was listed), and example quotations for the TPB beliefs and the additional construct of green hotel knowledge. The findings of the focus groups were used as a basis for the development of the measurement scales used in the pilot study. The following section presents the findings for each belief and the additional construct of green hotel knowledge.

Table 4.2

Major Categories of Beliefs (N =15).

Category	Beliefs	Example Quotation
Behavioural Beliefs	Protecting the environment *(n= 9)*	"In staying at a green hotel I would help the environment as it should not pay the price for my acts".
	Environmental obligations *(n= 5)*	"By staying at a green hotel, this would show how committed I am to the environment".
	Securing a future for next generation *(n= 4)*	"If everyone initiated in booking at a green hotel, it would secure a future for the next generations."
	Staying at a healthy environment *(n= 3)*	"The green hotel practices makes me feel that I am staying at a healthy environment."
	Greenwashing *(n= 7)*	"I wonder how environmentally friendly these hotels really are and what happens behind the scenes."
	Comfort*(n=4)*	"I do not want to compromise my comfort by staying at a green hotel."
Beliefs about the Expectations of Others	Family/ relatives*(n =7)*	"My family member would encourage me to stay at a green hotel."
	Younger generation *(n =5)*	"I guess the younger generation will be pushing to book at a green hotel because they are into that."
	Colleagues *(n =5)*	"I guess some of the encouragement would come from my colleagues."
Beliefs about the Behaviour of Others	Family/ relatives*(n= 5)*	"I guess any of my relatives would stay at a green hotel."
	Younger generation *(n= 4)*	"Most of the young people I know would book in a green hotel."
	Colleagues *(n= 3)*	"Some of my work colleagues show interest in booking at environmentally friendly hotels."
Control Beliefs	Location *(n = 8)*	"The convenience of the location would definitely affect my decision."
	Participating in environmental certification and eco-labelling *(n= 7)*	"I have no clear idea about the green practices they conduct and if they are following any certification."
	Visibility of green practices *(n=5)*	"I need to see how hotels promote their green practices."
	High price*(n= 13)*	"I do not think that I am totally ready to pay the extra price for staying at a green hotel."
Green Hotel Knowledge	Knowledge *(n =13)*	"More understanding about the hotel's green practices would surely influence me to choose between two hotels."

4.2.2.1 Behavioural beliefs

According to the TPB model, behavioural beliefs refer to the perceived positive or negative outcomes of conducting the behaviour (Fishbein & Ajzen, 2010). From the focus group discussions, in addition to the open-ended questionnaires, this study identified six categories that would make an individual more likely to stay at a hotel in the near future: (1) protecting the environment, (2) fulfilling environmental obligations, (3) assisting in securing a future for next generations, (4) staying at a healthy environment, (5) greenwashing, and (6) compromising on comfort.

The first three beliefs related to the environment and have been reported in previous research as factors that affect environmental consumer behaviour in different contexts (De Leeuw et al., 2015; Kim & Han, 2010; Lee, Hsu, Han, & Kim, 2010). Besides, being in a healthy environment is consistent with previous studies as one of the main benefits of staying at a green hotel (Han et al., 2010; Kim & Han, 2010). Perceptions of greenwashing were identified as the primary concern related to staying at a green hotel. According to Pizam (2009), some hotels claim to be environmentally-friendly by hanging a green sign and using ‘green’ as a marketing ploy. Compromising on levels of comfort was identified as another concern as travellers might perceive green practices involving some sacrifice of comfort (Baker et al., 2014; Kang et al., 2012).

4.2.2.2 Injunctive normative and descriptive beliefs

According to TPB, injunctive normative beliefs relate to the likelihood that important referents support performing a certain behaviour, whereas descriptive normative beliefs relate to the perceived behaviours of those important referents (Fishbein & Ajzen, 2010). Those referents are people close to an individual and who influence their decision-making. In terms of normative beliefs, most participants in the focus group considered "family and relatives" as a source of social influence that would support their stay and would actually stay at a green hotel. Other sources of social influence that were mentioned were "younger generation", and "colleagues". These individuals were identified in other studies as sources of support (Han et al., 2010; Han & Kim, 2010). Specifically, the younger generation has also been reported by recent research indicating their

influential role in encouraging pro-environmental purchasing decisions (Muralidharan, Rejón-Guardia, & Xue, 2016).

4.2.2.3 Control beliefs

According to TPB, control beliefs are related to the existence or lack of resources that can enable or interfere with the performance of a given behaviour (Ajzen, 1991). Participants identified four control beliefs. "Location" was the most frequently mentioned control belief that participants stated that the convenience of the green hotel location facilitated their decisions to stay at green hotels. This was followed by "participating in environmental certification and eco-labelling" and "visibility of green practices". In terms of barriers, most participants indicated that the "high price" of green hotels would inhibit them from staying at a green hotel. According to them, green hotels might add extra expenses for implementing green practices, so it was quite reasonable that they indicated price as the number one behavioural inhibitor of staying at a green hotel. Several studies report the importance of the convenient location of the green hotel in travellers' purchasing decisions (Han & Kim, 2010; Han et al., 2010; Kim & Han, 2010). Further, a hotel's engagement with environmental accreditation requirements has a significant impact on travellers' decision-making (Berezan et al., 2014; Rahman et al., 2015; Yu et al., 2017). As for visible communication, Teng et al. (2015) state that visible information about green practices, specifically public advertising and information cards or brochures, would impact travellers' decisions regarding staying at green hotels. Finally, travellers hold a perception that green hotels cost more to stay at than traditional ones, which is a common finding in previous studies (Han & Kim, 2010; Han et al., 2010; Kim & Han, 2010; Millar et al., 2012). In fact, travellers associate green hotels with higher price premiums (Kang et al., 2012).

4.2.2.4 Green hotel knowledge

The theory of planned behaviour does not account for all the variance in social behaviour, and still leaves a significant percentage of unexplained variance in intentions and behaviour (Armitage & Conner, 2001). Consequently, extending the TPB framework may be undertaken by adding further constructs to improve

the theory's predictive power (Perugini & Bagozzi, 2001). In the focus group sessions, the participants were asked to add any further information that would affect their decision to stay at a green hotel in the future.

The majority of participants indicated that their lack of knowledge about the implementation of environmental practices in green hotels impedes their decisions concerning staying at such hotels. Additionally, they indicated that further knowledge is warranted about the implementation of these practices. Hence, green hotel knowledge was viewed as an additional construct that would affect their decision to stay at a green hotel. Integrating green hotel knowledge into TPB meets Ajzen's (1991) requirements for extending the TPB model. Specifically, this added construct does not overlap conceptually with the TPB original constructs. In addition, based on the previous literature, knowledge can be regarded as a significant causal factor determining one's purchasing decision (e.g., Aertsens et al., 2011; Dumitrescu et al., 2011; Xiao et al., 2011). Accordingly, green hotel knowledge is potentially applicable to various decision-making processes in different contexts.

4.3 Quantitative Study

In this section, the results of the data analysis for the main survey are reported. Fifty-three items of the measurement instrument were included in the main survey (Appendix E). As explained in Section 3.4.2, some preliminary tests were first conducted to ensure the normality of the data. Next, major analytical techniques were used in this research to analyse the quantitative data. Firstly, exploratory factor analysis (EFA) was used to develop and refine scales. Secondly, a two-step approach was implemented using confirmatory factor analysis (CFA) followed by structural equation modelling (SEM) for model comparison and hypothesis testing. Further, multi-group analysis and ANOVA tests were performed to test the differences between the three groups, and finally, ANOVA tests were performed to test the impact of demographics. The next section reports the demographic characteristics of the samples and the descriptive statistics of the study variables.

4.3.1 Demographic characteristics of the samples

As shown in Table 4.3, the whole valid participant sample (N = 771) consisted of 455 females (59.0%) and 314 males (41.0%). The status of gender distribution among participants in the current research may be attributed to females being more likely to participate in research projects than males (Smith, 2008). Notably, in a study by Jackson, Ervin, Gardner and Schmidt (2001), the researchers indicate that females are opt to engage in online activity related to exchanging of information whereas males are more likely to engage in online activity characterized by seeking of information (Jackson et al., 2001).

Nearly half (48.9%) of the participants were in the age group of 20 years and 39 years. According to Moore and Tarnai (2002), younger people are more likely to partake in surveys than older people. Further, this aligns with the profile of Australian travellers as 38 per cent are under the age of 44 (FairFax Media, 2018). Furthermore, in the pro-environmental context, younger consumers were identified as the group who respond more to environmental issues with personal responsibility (De Leeuw et al., 2015; Muralidharan et al., 2016).

Married people (43.3%) outnumbered those who reported being single (34.0%), de facto (11.7%), divorced (5.2%), separated (3.8%) and widowed (2.1%). This indicated that married people might respond to online surveys in greater proportions. Further, the participants were mainly employed full-time (42.3%), followed by part-time (24.8%). This result indicates that the full-time employees have a higher participation rate in online surveys. The participants were mainly educated as most had achieved an undergraduate degree (61.2%), or a postgraduate degree level (14.9%) but also included those participants who had college certificate and vocational training (17.6%). Several researchers have indicated that more educated individuals are more likely to participate in surveys than less educated individuals (Curtin, Presser, & Singer, 2000; Goyder, Warriner, & Miller, 2002). Australian travellers are described as being educated and curious to learn more (FairFax Media, 2018).

The gross income for the majority of the participants was distributed between AUD $20,000 to AUD $110,000. This finding does not align with previous studies

that report that more affluent people have a higher tendency to participate in surveys (Curtin et al., 2000; Goyder et al., 2002). However, this result aligns with the profile of the Australian travellers as 47 per cent of travellers earn less than AUD $120,000 (FairFax Media, 2018). Finally, more than 77 per cent of the participants were born in Australia.

Of the 771 participants, 33.2 per cent were randomly assigned to complete the survey without images (CG) and 33.3 per cent were assigned to fill the survey with positively- framed images related to the hotels' environmental preservation actions (PFI), whereas 33.5 per cent were assigned to fill the survey with negatively-framed images that reflect environmental pollution of these hotels (NFI). It was observed from the results in Table 4.3 that the three groups have similar characteristics. The three groups consisted of around 59 per cent females and 41 per cent males, which indicated that the responses from females were far more significant compared to males. In the three groups, the most significant percentage of the sample is between 20 years and 39 years, indicating that the responses were mainly from younger people. Married people outnumbered those who reported being single in the three groups. The participants were mainly employed full-time and were mainly educated across different groups, which aligns with the previous discussion that more educated people with full-time jobs have a higher tendency to participate in surveys. The gross income for the CG and PFI was mainly distributed between AUD $50,000 to AUD $79,999, whereas, for the NFI, it was mainly distributed between AUD $20,000 to AUD $49,999. In sum, the three samples are relatively evenly distributed in terms of their demographic characteristics. However, though the researcher made a great effort to match the samples in advance of collecting data, some degree of discrepancy was found in income between the NFI and the other two groups.

Table 4.3

Demographic Profiles

	Total (N=771)		Control Group (n=256)		Positively-framed Images Group (n=257)		Negatively-framed Images Group (n=258)	
	Frequency	**(%)**	**Frequency**	**(%)**	**Frequency**	**(%)**	**Frequency**	**(%)**
Gender								
Female	455	59.0	152	59.4	150	58.4	153	59.3
Male	316	41.0	102	39.8	107	41.6	105	40.7
Age								
Under 20	49	6.4	13	5.0	25	9.7	11	4.3
20-29	188	24.4	63	24.6	58	22.6	67	26.0
30-39	189	24.5	60	23.4	59	23.0	70	27.1
40-49	135	17.5	49	19.9	51	19.8	35	13.6
50-59	111	14.4	33	12.9	35	13.6	43	16.7
60 and above	99	12.8	38	14.8	29	11.3	32	12.4
Marital Status								
Married	334	43.3	114	44.5	118	45.9	102	39.5
Widowed	16	2.1	6	2.3	7	2.7	3	1.2
Divorced	40	5.2	13	5.1	9	3.5	18	7.0
Separated	29	3.8	12	4.7	6	2.3	11	4.3
Never married	262	34.0	85	33.2	85	33.1	92	35.7
Defacto	90	11.7	26	10.2	32	12.5	32	12.4
Employment Status								
Employed full time	326	42.3	119	46.5	103	40.1	104	40.3
Employed part time	191	24.8	40	15.6	56	21.8	95	36.8
Self employed	80	10.4	29	11.3	21	8.2	30	11.6
Unemployed	32	4.1	10	3.9	13	5.1	9	3.5
Retired	72	9.3	33	12.9	27	10.5	12	4.7
Student	41	5.3	14	5.5	21	8.2	6	2.3
Other	29	3.8	11	4.3	16	6.2	2	.8
Education								
High School Graduate	30	3.9	6	2.3	11	4.3	13	5.0
Vocational Training	136	17.6	48	18.8	29	11.3	59	22.9
Undergraduate Degree	472	61.2	161	62.9	171	66.5	140	54.3
Post Graduate Degree	115	14.9	37	14.5	39	15.2	39	15.1
Other	18	2.3	4	1.6	7	2.7	7	2.7
Income								
Less than AU$20,000	61	7.9	10	3.9	15	5.8	36	14.0
AU$20,000 - AU$49,999	195	25.3	35	13.7	61	23.7	99	38.4
AU$50,000 - AU$79,999	252	32.7	99	38.7	87	33.9	66	25.6
AU$80,000 - AU$109,999	166	21.5	75	29.3	59	23.0	32	12.4
AU$110,000 - AU$139,999	61	7.9	28	10.9	23	8.9	10	3.9
AU$140,000 - AU$169,999	23	3.0	6	2.3	7	2.7	10	3.9
More than AU$170,000	13	1.7	3	1.2	5	1.9	5	1.9
Country of Birth								
Australia	598	77.6	196	76.6	199	77.4	203	78.7
New Zealand	21	2.7	7	2.7	6	2.3	8	3.1
United Kingdom	54	7.0	21	8.2	21	8.2	12	4.7
China	6	.8	1	.4	4	1.6	1	.4
India	10	1.3	4	1.6	3	1.2	3	1.2
Vietnam	4	.5	0	0	3	1.2	1	.4
Philippines	11	1.4	3	1.2	5	1.9	3	1.2
South Africa	4	.5	2	.8	0	0	2	.8
Malaysia	5	.6	2	.8	0	0	3	1.2
Germany	4	.5	2	.8	0	0	2	.8
Other	54	7.0	18	7.0	16	6.2	20	7.8

4.3.2 Descriptive statistics

The descriptive summary of the indirect and direct constructs of the TPB model in addition to the additional construct of green hotel knowledge is presented in the following tables. Each table firstly presents the descriptive statistics for the whole sample followed by the statistics for each group (i.e., CG, PFI group and NFI group).

Table 4.4 presents the mean scores and standard deviation of the behavioural belief measures (behavioural beliefs and outcome evaluation). The results for the behavioural beliefs and outcome evaluation scores ranged between (*M*=3.59, *SD*=1.27) and (*M*=6.10, *SD*=.838) on a scale of seven indicating that participants are aware of the outcomes of staying at green hotels. The highest mean scores were recorded for "helping to protect the environment" and "experiencing a healthy environment" as the outcome evaluation mean for both these items was (*M*=6.10, *SD*=.838). The lowest mean was recorded for the belief "by staying at a green hotel I would not be compromising on comfort". This indicates that travellers think that by staying at a green hotel, their levels of comfort might be compromised.

Table 4.4

Descriptive Statistics for Behavioural Beliefs Measures

		Total (N=771)		**CG (n=256)**		**PFI Group (n=257)**		**NFI Group (n=258)**	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Behavioural Beliefs	Bb1: help protect the environment.	5.92	.864	5.97	.861	6.12	.889	5.69	.789
	Bb2: contribute to fulfilling my environmental obligations.	5.86	.878	5.96	.869	6.00	.870	5.61	.843
	Bb3: I would assist in securing a future for next generations.	5.84	.854	5.87	.852	6.06	.868	5.58	.774
	Bb4: I would be able to experience a healthy environment.	5.81	.855	5.82	.907	6.04	.873	5.57	.708
	Bb5: I wouldn't be compromising on comfort.	3.59	1.27	3.45	1.25	3.45	1.23	3.87	1.28
Outcome Evaluation	OE1: Helping to protect the environment.	6.10	.819	6.18	.857	6.36	.745	5.77	.736
	OE2: Contributing to fulfilling my environmental obligations.	5.97	.855	6.07	.877	6.13	.837	5.70	.787
	OE3: Assisting in securing a future for next generations.	6.03	.851	6.10	.846	6.29	.776	5.68	.815
	OE4: Experiencing a healthy environment.	6.10	.838	6.18	.832	6.34	.791	5.78	.792
	OE5: Not compromising on comfort.	3.62	1.00	3.51	1.15	3.49	1.19	3.87	1.21

Regarding injunctive normative beliefs and motivation to comply, the highest mean score was recorded for the item “The younger people I know think I should stay at a green hotel” (*M*=5.18, *SD*=1.12). The lowest mean was recorded for the item “My family/ relatives think I should stay at a green hotel” (*M*=4.95, *SD*=1.04) as presented in Table 4.5. Nevertheless, the result mean scores on a scale of seven were relatively close. This indicates that the pressure from the different referent groups is approximately the same.

Table 4.5

Descriptive Statistics for Injunctive Normative Beliefs Measures

		Total (N=771)		**CG (n=256)**		**PFI Group (n=257)**		**NFI Group (n=258)**	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Injunctive Normative Beliefs	INb1: My family/ relatives think I should stay at a green hotel.	4.95	1.04	5.02	1.07	5.12	1.08	4.72	.930
	INb2: The younger people I know think I should stay at a green hotel.	5.18	1.12	5.12	1.11	5.23	1.11	5.20	1.13
	INb3: My colleagues think I should stay at a green hotel.	5.13	1.09	5.12	1.11	5.22	1.11	5.07	1.06
	INb4: My friends think I should stay at a green hotel.	4.99	1.02	5.06	1.03	5.20	1.07	4.71	.907
Motivation to Comply	MC1: I want to do what my family/ relatives think I should do.	5.00	1.03	5.10	1.01	5.12	1.02	4.78	1.04
	MC2: I want to do what the younger people I know think I should do.	5.14	.996	5.12	.993	5.19	.982	5.11	1.01
	MC3: I want to do what my colleagues think I should do.	5.15	1.01	5.12	.993	5.19	.982	5.13	1.04
	MC4: I want to do what my friends think I should do.	5.02	1.04	5.12	.999	5.17	1.04	4.78	1.03

As for the descriptive normative beliefs and identification with referents, their mean values on a scale of seven were lower than the other constructs and were close in range and were between (*M*=4.85, *SD*=.979) and (*M*=4.94, *SD*=.992) as presented in Table 4.6.

Table 4.6

Descriptive Statistics for Descriptive Normative Beliefs Measures

		Total (N=771)		**CG (n=256)**		**PFI Group (n=257)**		**NFI Group (n=258)**	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Descriptive Normative Beliefs	DNb1: Most of my family/ relatives have stayed at a green hotel when travelling.	4.88	1.01	5.02	1.08	4.92	1.00	4.71	.923
	DNb2: Most of the younger people I know have stayed at a green hotel when travelling.	4.87	1.04	5.11	1.11	4.88	1.02	4.63	.913
	DNb3: Most of my colleagues have stayed at a green hotel when travelling.	4.85	.979	5.03	1.07	4.89	.958	4.65	.863
	DNb4: Most of my friends have stayed at a green hotel when travelling.	4.88	.997	5.05	1.03	4.94	1.00	4.66	.908
Identification With Referents	IR1: I want to be like my family/ relatives.	4.94	1.02	5.10	1.01	4.96	.978	4.77	1.04
	IR2: I want to be like the younger people I know.	4.88	.975	5.12	.993	4.87	.926	4.65	.952
	IR3: I want to be like my colleagues.	4.85	.939	5.07	.962	4.85	.884	4.61	.916
	IR4: I want to be like my friends.	4.94	.992	5.11	1.01	4.99	.994	4.71	.936

The control beliefs and perceived power mean values ranged between (*M*= 3.55, *SD*=1.01) and (*M*=6.05, *SD*=1.00) (Table 4.7). The participants indicated that they disagree with the belief that “staying at a green hotel is expensive” (*M*= 3.55, *SD*=1.01). As for the control belief “the hotel should have visible communications about its green practices”, it had the highest mean (*M*=6.05, *SD*=1.00), which indicates that hotels should promote green practices in various channels.

Table 4.7

Descriptive Statistics for Control Beliefs Measures

		Total (N=771)		CG (n=256)		PFI Group (n=257)		NFI Group (n=258)	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Control Beliefs	Cb1: Staying at a green hotel is expensive.	3.55	1.01	3.76	1.46	3.43	1.24	3.45	1.25
	Cb2: The location of a green hotel needs to be convenient.	5.56	1.04	5.68	1.10	5.62	1.07	5.38	1.09
	Cb3: The hotel should have visible communications about its green practices.	6.05	.979	6.09	.962	6.01	.827	6.05	1.02
	Cb4: The hotel should participate in environmental certification and eco-labelling.	5.99	.997	6.05	1.00	5.97	.851	5.95	1.11
Perceived Power	PP1: If green hotels are expensive, this would make it more difficult for me to stay at one.	3.57	1.24	3.72	1.37	3.48	1.20	3.51	1.15
	PP2: If the green hotel's location is not convenient, this would make it more difficult for me to stay at one.	3.59	1.27	3.87	1.28	3.45	1.23	3.45	1.25
	PP3: If the green hotel doesn't have visible communications about its green practices, this would make it more difficult for me to stay at one.	3.61	1.29	3.94	1.34	3.45	1.23	3.45	1.25
	PP4: If the green hotel doesn't participate in environmental certification and eco-labelling, this would make it more difficult for me to stay at a one.	3.61	1.29	3.94	1.34	3.45	1.23	3.45	1.25

For the direct measures of TPB, participants (n=771) reported positive attitudes, high perceived social pressure (injunctive norms) and moderately high descriptive norms and high perceived behavioural control. They also had a moderately high mean green hotel knowledge score. They also reported strong intentions to stay at a green hotel. According to Table 4.8, the mean scores for attitude items means were high and ranged between (*M*=5.61, *SD*= .985) and (*M*=5.93, *SD*=.938) exceeding 4 (neutral).

Table 4.8

Descriptive Statistics for Attitudes

		Total (N=771)		CG (n=256)		PFI Group (n=257)		NFI Group (n=258)	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Attitudes	ATT1 : Good	5.77	.904	5.85	.903	6.21	.905	5.57	.800
	ATT2: Desirable	5.77	.980	5.83	.899	5.88	1.01	5.57	.800
	ATT3: Wise	5.91	.938	5.64	.888	5.72	.904	5.58	.774
	ATT 4: Favourable	5.93	.966	5.64	.888	5.92	1.01	5.57	.800
	ATT5: Positive	5.82	.864	5.82	.910	5.91	1.02	5.57	.800
	ATT6: Enjoyable	5.61	.985	5.82	.910	5.66	1.06	5.64	.888
	ATT7: Pleasant	5.63	.915	5.64	.888	5.69	1.04	5.57	.800

For the subjective injunctive norms, the three items ranged fairly high between (*M*=5.14, *SD*=1.14) and (*M*=5.25, *SD*=1.15). In addition, the mean scores for the items in the three groups had relatively close values as presented in Table 4.9. As for the subjective descriptive norms, Table 4.9 shows that the two items ranged between (*M*=4.65, *SD*=1.39) and (*M*=4.71, *SD*=1.36). These means were close to neutral (4).

Table 4.9

Descriptive Statistics for Subjective Injunctive and Descriptive Norms

		Total (N=771)		Control Group (n=256)		Positively -Framed Images Group (n=257)		Negatively-framed Images Group (n=258)	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Subjective Injunctive Norms	SIN1: Most people who are important to me think I should stay at a green hotel when travelling.	5.16	1.08	5.09	.998	5.12	1.16	5.28	1.072
	SIN2: Most people who are important to me would want me to stay at a green hotel when travelling.	5.14	1.14	5.10	1.00	5.15	1.22	5.19	1.209
	SIN3: Most people whose opinions I value would prefer that I stay at a green hotel when travelling.	5.25	1.15	5.18	1.07	5.24	1.20	5.33	1.166
Subjective Descriptive Norms	SDN1: Most people who are important to me will stay at a green hotel when travelling.	4.71	1.36	4.83	1.25	5.23	1.06	4.08	1.464
	SDN2: Most people whose opinions I value will stay at a green hotel when travelling.	4.65	1.39	4.77	1.26	5.25	1.03	3.96	1.496

The items measuring perceived behavioural control ranged fairly high. As presented in Table 4.10, the items' statistics ranged between (*M*=5.57, *SD* =1.00) and (*M*=5.62, *SD*= .986).

Table 4.10

Descriptive Statistics for Perceived Behavioural Control

		Total (N=771)		**CG (n=256)**		**PFI Group (n=257)**		**NFI Group (n=258)**	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Perceived Behavioural Control	PBC1: Whether or not I stay at a green hotel when travelling is entirely my decision.	5.57	1.00	5.48	.826	5.95	.884	5.30	1.15
	PBC2: I am confident that if I want, I can stay at a green hotel when travelling.	5.62	.986	5.58	.890	5.94	.866	5.33	1.09
	PBC3: I have resources, time, and opportunities to stay at a green hotel when travelling.	5.61	1.02	5.58	.890	5.95	.899	5.30	1.15

Green hotel knowledge had mean scores for the three items above 4 ranging between (*M*=4.78, *SD*=1.39) and (*M*=4.99, *SD*=1.26) (see table 4.11).

Table 4.11

Descriptive Statistics for Green Hotel Knowledge

		Total (N=771)		**CG (n=256)**		**PFI Group (n=257)**		**NFI Group (n=258)**	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Green Hotel Knowledge	GHK1: Compared to an average person, I am familiar with hotels' environmental policies.	4.78	1.39	4.89	1.29	5.31	1.09	4.14	1.479
	GHK2: Compared to my friends, I am familiar with hotels' green programmes.	4.96	1.22	4.93	1.10	5.16	1.18	4.79	1.35
	GHK3: Compared to people who travel a lot, I am familiar with hotels' green labels.	4.99	1.26	4.94	1.17	5.22	1.24	4.82	1.34

As for intentions to stay at a green hotel, the mean and standard deviation scores for the three items ranged between (*M*=5.53, *SD*=1.07) and (*M*=6.09, *SD*=1.06), which is considered high (See table 4.12).

Table 4.12

Descriptive Statistics for Intentions

		Total (N=771)		CG (n=256)		PFI Group (n=257)		NFI Group (n=258)	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Intention to Stay	INT1: I am willing to stay at a green hotel when travelling.	6.09	1.06	5.43	.745	5.82	.931	5.20	1.208
	INT2: I plan to stay at a green hotel when travelling.	5.53	1.07	5.47	.840	5.92	.969	5.23	1.208
	INT3: I will make an effort to stay at a green hotel when travelling.	5.76	1.05	5.41	.923	6.05	.951	5.41	1.188

4.3.3 Belief-base measures

The expectancy-value model was employed as explained previously in Section 3.4.2.2 to produce the belief base-measures for the indirect constructs of TPB (Fishbein & Ajzen, 2010). In order to gain an overall level of four belief constructs, items for each belief construct were multiplicatively combined with their evaluative components (Bb*i*×OE*i*, INb*i*×MC*i*, DNb*i*×IR*i,* and Cb*i*×PP*i*) (Fishbein & Ajzen, 2010).

For behavioural beliefs, the five potential outcomes identified in the elicitation study were multiplied with their corresponding belief strength to obtain the overall behavioural beliefs score (Table 4.13). For the injunctive normative beliefs, the normative belief strength was multiplied by the participants' motivation to comply with the four referents identified in the elicitation study (Table 4.14). Also, the measure for descriptive normative beliefs was obtained by multiplying the belief strength for these referents with the participants' identification with these referents (Table 4.15). Finally, the four control factors identified in the elicitation study were multiplied by their corresponding perceived power (Fishbein & Ajzen, 2010) (Table 4.16). The results from these calculations were used in the final analysis of the belief constructs.

Table 4.13

Behavioural Beliefs

Outcome	**Belief Strength (Bb)**		**Outcome Evaluation (OE)**		**Behavioural Belief (BB)**	
(by staying at a green hotel I would)	*M*	*SD*	*M*	*SD*	*M*	*SD*
Help to protect the environment	5.92	.864	6.10	.819	36.48	8.432
Contribute to fulfilling environmental obligations.	5.86	.878	5.97	.855	35.31	8.608
Assist in securing a future for next generations	5.84	.854	6.03	.851	35.50	8.3826
Experience a healthy environment.	5.81	.855	6.10	.838	35.81	8.3461
Not compromise on comfort.	3.59	1.271	3.62	1.200	29.32	9.627

Table 4.14

Injunctive Normative Beliefs

Normative Referent	**Injunctive Normative Belief Strength (INb)**		**Motivation to Comply (MC)**		**Injunctive Normative Belief (INB)**	
	M	*SD*	*M*	*SD*	*M*	*SD*
Family/ relatives	4.95	1.046	5.00	1.037	25.49	9.376
The younger people	5.18	1.121	5.14	.996	27.28	9.459
Colleagues	5.13	1.097	5.15	1.005	27.30	9.284
Friends	4.99	1.026	5.02	1.041	25.77	9.290

Table 4.15

Descriptive Normative Beliefs

Normative Referent	**Descriptive Normative Belief Strength (DNb)**		**Identification with Referents (IR)**		**Descriptive Normative Belief (DNB)**	
	M	*SD*	*M*	*SD*	*M*	*SD*
Family/ relatives	4.88	1.011	4.94	1.020	24.83	9.115
The younger people	4.87	1.041	4.88	.975	24.42	8.927
Colleagues	4.85	.979	4.85	.939	24.11	8.508
Friends	4.88	.997	4.94	.992	24.76	8.873

Table 4.16

Control Beliefs

Perceived behavioural control	Control Belief Strength (Cb)		Perceived Power (PP)		Control Belief (CB)	
	M	*SD*	*M*	*SD*	*M*	*SD*
Staying at a green hotel is expensive.	3.55	1.335	4.57	1.249	16.24	11.536
The location of a green hotel needs to be convenient.	5.56	1.099	4.59	1.271	25.44	8.483
The hotel should have visible communications about its green practices.	6.05	.939	4.61	1.298	27.839	9.049
The hotel should participate in environmental certification	5.99	.994	4.65	1.298	27.291	9.303

4.3.4 Exploratory factor analysis (EFA)

The 38 items from the survey were subjected to one EFA using PAC with oblique rotation. The KMO value was .897, which was beyond the recommended value of .6 (Kaiser, 1974) and Bartlett's Test of Sphericity reached the statistical significance (Bartlett, 1954) suggesting the feasibility of factor analysis. Therefore, the data were deemed fit to be analysed by EFA.

The initial EFA derived ten factors with 78.5 per cent of the total variance explained. Communalities between all items except one were above .6, which is, according to Field (2018), within the acceptable threshold. One measurement item, BB5 (I believe that by staying at a green hotel I would not be comprising on comfort), failed to load at the designated .30 cut-off point and displayed low communalities of .24. This indicates that this item is not useful to describe the factor of “behavioural beliefs” because its factor loading on behavioural beliefs was too small; therefore, this item was removed. Consequently, a 10-factor solution, with a total variance explained of 82.45 per cent, was produced, with factor loadings for 37 remaining measurement items being above .5, and communalities above .6. Of the 10 factors, the first factor contained three items related to “perceived behavioural control” and accounted for the largest proportion (19.23%) of the total variance explained. The second factor “intention to stay”, explained 15.4 per cent of the total variance and comprised of three items. The third factor “subjective injunctive norms” explained 13.2 per cent of the

variance and contained three items. The fourth factor contained seven items related to “attitude” and accounted for 9.58 per cent of the total variance explained. The fifth factor, “subjective descriptive norms”, explained 6.23 per cent of the total variance and comprised of three items. The sixth factor, “control beliefs”, contained four items and accounted for 5.44 per cent of the total variance. The seventh factor, “green hotel knowledge”, explained 4.31 per cent of the total variance of data, and comprised three scale items. The eighth factor, “injunctive normative beliefs”, contained four items and explained 3.11 per cent of the total explained variance. The ninth factor, “behavioural beliefs”, contained four items and, explained 3.02 per cent of the total variance. The tenth and last factor, “descriptive normative beliefs”, contained four items and explained 2.96 per cent of the total explained variance.

Furthermore, the reliability of the factors was examined. To ensure reliability, the internal consistency of the 10 factors was calculated using Cronbach’s Alpha (Nunnally & Bernstein, 1978). The reliability coefficient values for the factors were above .8 and demonstrated high internal consistency. Therefore, the ten-factor solution of TPB, which is the so-called ‘extended TPB’, was found acceptable. Table 4.17 presents the detailed measurement items, factor loadings and scale reliability results.

Table 4.17

Exploratory Factor Analysis and Internal Consistency Analysis

Factor	Factor Loading	Eigen	% of Variance	Cronbach's Alpha
Factor 1: Perceived Behavioural Control		10.31	19.23	.929
PBC3: I have resources, time, and opportunities to stay at a green hotel when travelling.	.96			
PBC1: I am confident that if I want, I can stay at a green hotel when travelling.	.94			
PBC2: Whether or not I stay at a green hotel when travelling is completely up to me.	.91			
Factor 2: Intention to Stay		6.45	15.40	.919
INT2: I will make an effort to stay at a green hotel when travelling.	.96			
INT1: I am willing to stay at a green hotel when travelling.	.91			
INT3: I plan to stay at a green hotel when travelling.	.78			
Factor 3: Subjective Injunctive Norms		5.39	13.20	.939
SIN1: Most people who are important to me would want me to stay at a green hotel when travelling.	.83			
SIN2: Most people who are important to me think I should stay at a green hotel when travelling.	.78			
SIN3: People whose opinions I value would prefer that I stay at a green hotel when travelling.	.75			
Factor 4: Attitudes		4.69	9.58	.947
ATT3: Wise	.96			
ATT7: Pleasant	.95			
ATT4: Favourable	.94			
ATT5: Positive	.86			
ATT6: Enjoyable	.85			
ATT2: Desirable	.77			
ATT1: Good	.69			
Factor 5: Subjective Descriptive Norms		3.23	6.23	.896
SDN1: Most people who are important to me will stay at a green hotel when travelling.	.74			
SDN2: Most people whose opinions I value will stay at a green hotel when travelling.	.71			

Table 4.17 *Continued*

Factor	Factor Loading	Eigen	% of Variance	Cronbach's Alpha
Factor 6: Control Beliefs		2.01	5.44	.933
CB3: The hotel should have visible communications about its green practices.	.95			
CB4: The hotel should participate in environmental certification and eco-labelling	.94			
CB1: Staying at a green hotel is expensive.	.85			
CB2: The location of a green hotel needs to be convenient.	.82			
Factor 7: Green Hotel Knowledge		1.63	4.31	.929
GHK2: Compared to my friends, I am familiar with hotels' green programmes.	.92			
GHK3: Compared to people who travel a lot, I am familiar with hotels' green labels.	.91			
GHK1: Compared to an average person, I am familiar with hotels' environmental policies.	.85			
Factor 8: Injunctive Normative Beliefs		1.39	3.11	.943
INB1: My family/ relatives think I should stay at a green hotel.	.91			
INB3: My colleagues think I should stay at a green hotel.	.90			
INB2: The younger people I know think I should stay at a green hotel.	.89			
INB4: My friends think I should stay at a green hotel.	.79			
Factor 9: Behavioural Beliefs		1.22	3.02	.904
BB3: Assist in securing a future for next generations.	.86			
BB2: Contribute to fulfilling my environmental obligations.	.83			
BB4: Experience a healthy environment.	.82			
BB1: Help to protect the environment	.81			
Factor 10: Descriptive Normative Beliefs		1.10	2.96	.946
DNB3: Most of my colleagues have stayed at a green hotel when travelling.	.83			
DNB4: Most of my friends have stayed at a green hotel when travelling.	.82			
DNB1: Most of my family/ relatives have stayed at a green hotel when travelling.	.77			
DNB2: Most of the younger people I know have stayed at a green hotel when travelling.	.74			

n= 771. KMO = .897, Bartlett's = .000. Extraction Method: Principle Axis Factoring. Rotation Method: Oblique Rotation.

4.3.5 Confirmatory factor analysis (CFA)

Having established the 37-items with 10 factors through EFA, CFA was employed. Firstly, CFA was conducted using the maximum likelihood method for each of the model's constructs to confirm the measurement scales, which was followed by conducting CFA for the overall measurement model to assess the underlying structure of the variables in the model. Model modification indices and standardised regression weights indicated that some items had low discriminate validity (high covariance with other measurements) and reliability (factor loadings below .5) in indicating the respective latent factors. Therefore, the overall measurement model was modified through estimated parameters to correct the inappropriate parameters encountered in the estimation process and produce a more parsimonious and reliable measurement model. According to the modification indices, seven covariances were added among errors for attitude items, injunctive normative and injunctive descriptive beliefs' items.

For the final CFA, 10 constructs were found robust and parsimonious for indicating travellers' intentions to stay at green hotels with the model fit indices reported in Table 4.18. Standard factor loadings, squared multiple correlations (SMC), t-values, average variance extracted (AVE), and construct reliability (CR) were reported to measure the reliability and validity of the measurement models (see Table 4.18). The CFA results of the data set indicated that the model fits the data well (x^2 =1671.130, df=587, x^2/df =2.847, RMSEA= 0.049, CFI=.969 and TLI = .965). These results provided evidence for the uni-dimensionality of each scale. Standard factor loadings, squared multiple correlations (SMC), t-values, average variance extracted (AVE), and construct reliability (CR) were reported to indicate the reliability and validity of the measurement models (see Table 4.19). Convergent and discriminant validity were also examined to achieve construct validity (Hair et al., 2010). All standardised loading estimates for measured items were all .7 and above, in this case exceeding the cut off level of .5 (Hair et al., 2010), consequently all items were accepted. Item reliability (SMC) values were all above .5 indicating that each item reflects the construct well (Holmes-Smith, 2010).

Table 4.18

Confirmatory Factor Analysis Results (n=771)

Factors	Factor Loading	SMC	*t*-value	AVE	CR
Factor 1: Behavioural Beliefs				.723	.912
BB3: Assist in securing a future for next generations.	.89	.79	24.3		
BB2: Contribute to fulfilling my environmental obligations.	.87	.74	22.6		
BB1: Help to protect the environment	.83	.68	21.2		
BB4: Experience a healthy environment.	.81	.66			
Factor 2: Injunctive Normative Beliefs				.671	.884
INB3: My colleagues think I should stay at a green hotel.	.86	.73	21.1		
INB2: The younger people I know think I should stay at a green hotel.	.83	.76			
INB4: My friends think I should stay at a green hotel.	.81	.65	19.4		
INB1: My family/ relatives think I should stay at a green hotel.	.77	.57	17.6		
Factor 3: Descriptive Normative Beliefs				.749	.923
DNB3: Most of my colleagues have stayed at a green hotel when travelling.	.87	.79	21.4		
DNB2: Most of the younger people I know have stayed at a green hotel when travelling.	.83	.77	21.1		
DNB4: Most of my friends have stayed at a green hotel when travelling.	.83	.76			
DNB1: Most of my family/ relatives have stayed at a green hotel when travelling.	.79	.69	20.7		
Factor 4: Control Beliefs				.672	.890
CB3: The hotel should have visible communications about its green practices.	.91	.76	22.9		
CB4: The hotel should participate in environmental certification and eco-labelling	.89	.79			
CB1: Staying at a green hotel is expensive.	.86	.74	21.0		
CB2: The location of a green hotel needs to be convenient.	.80	.65	20.1		
Factor 5: Attitudes				.636	.923
ATT3: Wise	.91	.77	22.2		
ATT7: Pleasant	.89	.73	21.2		
ATT4: Favourable	.84	.67	20.1		
ATT5: Positive	.81	.65	19.9		
ATT6: Enjoyable	.77	.70	17.6		
ATT2: Desirable	.73	.57	16.7		
ATT1: Good	.70	.55			
Factor 6: Subjective Injunctive Norms				.753	.901
SIN3: People whose opinions I value would prefer that I stay at a green hotel when travelling.	.89	.75	25.2		
SIN2: Most people who are important to me think I should stay at a green hotel when travelling.	.93	.77	26.3		
SDN1: Most people who are important to me will stay at a green hotel when travelling.	.82	.68			

Table 4.18 *Continued*

Factors	Factor Loading	SMC	*t*-value	AVE	CR
Factor 7: Subjective Descriptive Norms				.810	.708
SDN1: Most people who are important to me will stay at a green hotel when travelling.	.91	.72			
SDN2: Most people whose opinions I value will stay at a green hotel when travelling.	.90	.71	25.5		
Factor 8: Perceived Behavioural Control				.717	.883
PBC3: I have resources, time, and opportunities to stay at a green hotel when travelling.	.88	.78	23.3		
PBC1: I am confident that if I want, I can stay at a green hotel when travelling.	.85	.76			
PBC2: Whether or not I stay at a green hotel when travelling is completely up to me.	.83	.69	22.9		
Factor 9: Green Hotel Knowledge				.817	.930
GHK2: Compared to my friends, I am familiar with hotels' green programmes.	.93	.79	25.3		
GHK3: Compared to people who travel a lot, I am familiar with hotels' green labels.	.91	.75	22.8		
GHK1: Compared to an average person, I am familiar with hotels' environmental policies.	.87	.62			
Factor 10: Intention to Stay				.804	.924
INT3: I plan to stay at a green hotel when travelling.	.92	.72	22.8		
INT1: I am willing to stay at a green hotel when travelling.	.90	.71			
INT2: I will make an effort to stay at a green hotel when travelling.	.87	.68	24.9		

Note: $x^{2=}$=1671.130, df=587, x^2/df =2.847, RMSEA= 0.049, CFI=.969 and TLI = .965

In addition to the CFA, AVE and CR for all measures were assessed for uni-dimensionality, reliability, and construct validity (Hair et al., 2010). The values for composite reliability, ranged from 0.706 to 0.977, exceeding the recommended threshold of .7 suggested by Hair et al. (2010) and the corresponding absolute t-value was greater than 1.96, indicating a high level of convergent validity (Hair et al., 2010). Finally, AVE values ranged from 0.706 to 0.935, thus exceeding the recommended value of 0.50 (Hair et al., 2010). This validated convergent validity. Moreover, the AVE value for each variable was superior than the squared correlation between variables (Table 4.19), demonstrating that discriminant validity was attained (Hair et al., 2010). Therefore, all 10 measurement constructs were confirmed to have high reliability and validity, and the finalised measurement model was confirmed.

Table 4.19

Correlations among Latent Constructs (Squared) and Reliabilities of Constructs

Measure	BB	INB	DNB	CB	ATT	SIN	SDN	PBC	GHK	INT
BB	1									
INB	0.335 (.112)	1								
DNB	0.274 (.075)	0.84 (.705)	1							
CB	0.11 (.012)	0.0109 (.0001)	0.306 (.0936)	1						
ATT	0.369 (.136)	0.077 (.006)	0.077 (.006)	0.069 (.005)	1.000					
SIN	0.301 (.090)	0.792 (.624)	0.647 (.419)	0.011 (.0001)	0.250 (0.063)	1.000				
SDN	0.269 (.072)	0.725 (.526)	0.737 (.543)	0.065 (.004)	0.085 (0.007)	0.682 (.465)	1.000			
PBC	0.322 (.103)	0.122 (.015)	0.154 (.024)	0.379 (.143)	0.444 (0.197)	0.049 (.002)	0.229 (.052)	1.000		
GHK	0.27 (.073)	0.19 (.036)	0.242 (.059)	0.031 (.001)	0.187 (0.035)	0.097 (.009)	0.278 (.077)	0.444 (.197)	1.000	
INT	0.463 (.214)	0.161 (.026)	0.215 (.046)	0.145 (.021)	0.171 (0.029)	0.084 (.007)	0.315 (.099)	0.631 (.398)	0.512 (.270)	1.000
Mean	34.484	26.393	24.530	24.596	5.153	4.015	4.983	5.780	5.083	5.260
SD	6.742	8.641	8.219	8.819	.923	1.071	1.187	1.235	.982	1.288

Note. BB: behavioural beliefs; INB: injunctive normative beliefs; DNB: descriptive normative beliefs; CB: control beliefs; ATT: attitude; SIN: subjective injunctive norm; SDN: subjective descriptive norm; PBC: perceived behavioural control; GHK; green hotel knowledge; INT: intention. Model measurement fit: x2: 2015.119 (df: 542, p<0.001), RMSEA: 0.056, CFI: 0.960, TLI: 0.95

4.3.6 Modelling comparison

In order to test whether the explanatory power of the TPB model could be strengthened by adding “SDN” and “GHK”, three models were specified, namely: the TPB, updated TPB with the addition of SDN, and the extended TPB model with both SDN and GHK. The three models were independently tested. The models were compared with regards to model fit, as well as the explanatory power. Table 4.20 details the results.

Firstly, the TPB model and an updated TPB model with the addition of descriptive normative beliefs and subjective descriptive norms were independently tested and compared using SEM. Both the TPB model (Figure 4.1) (x^2=1569.983, df= 334, p<0.001, x^2 /df= 4.701, RMSEA= 0.069, CFI= 0.954; TLI= 0.948) and the updated TPB model (Figure 4.2) ($x^{2=}$ 1833.10, df= 504, p<0.001, x^2 /df= 3.636, RMSEA= 0.066, CFI= 0.954, TLI= 0.950) could predict the travellers’ intentions to stay at a green hotel. After achieving the acceptable results of the model evaluations, the two models were compared for explanatory power. The results showed that the updated TPB model adding descriptive normative beliefs and subjective descriptive norms had better explanatory power for intentions (Adjusted R^2: 0.33) than the TPB model (Adjusted R^2: 0.26). Although the path between SDN and INT was not significant, it seemed that the path between ATT and INT, and the path between SIN and INT were strengthened in the updated TPB model. Furthermore, its fit statistics were comparatively higher (x^2 /df= 3.636, RMSEA= 0.066) than the TPB model (x^2 /df= 4.701, RMSEA= 0.069). In addition, its fit statistics were relatively superior (x^2 /df= 3.636, RMSEA= 0.066) than the TPB model (x^2 /df= 4.701, RMSEA= 0.069). These results are in line with prior research about TPB modelling comparisons in various settings (e.g., De Leeuw et al., 2015; Fishbein & Ajzen, 2010) and indicate that including descriptive normative beliefs and subjective descriptive norms contributes to an improved understanding of travellers’ intentions.

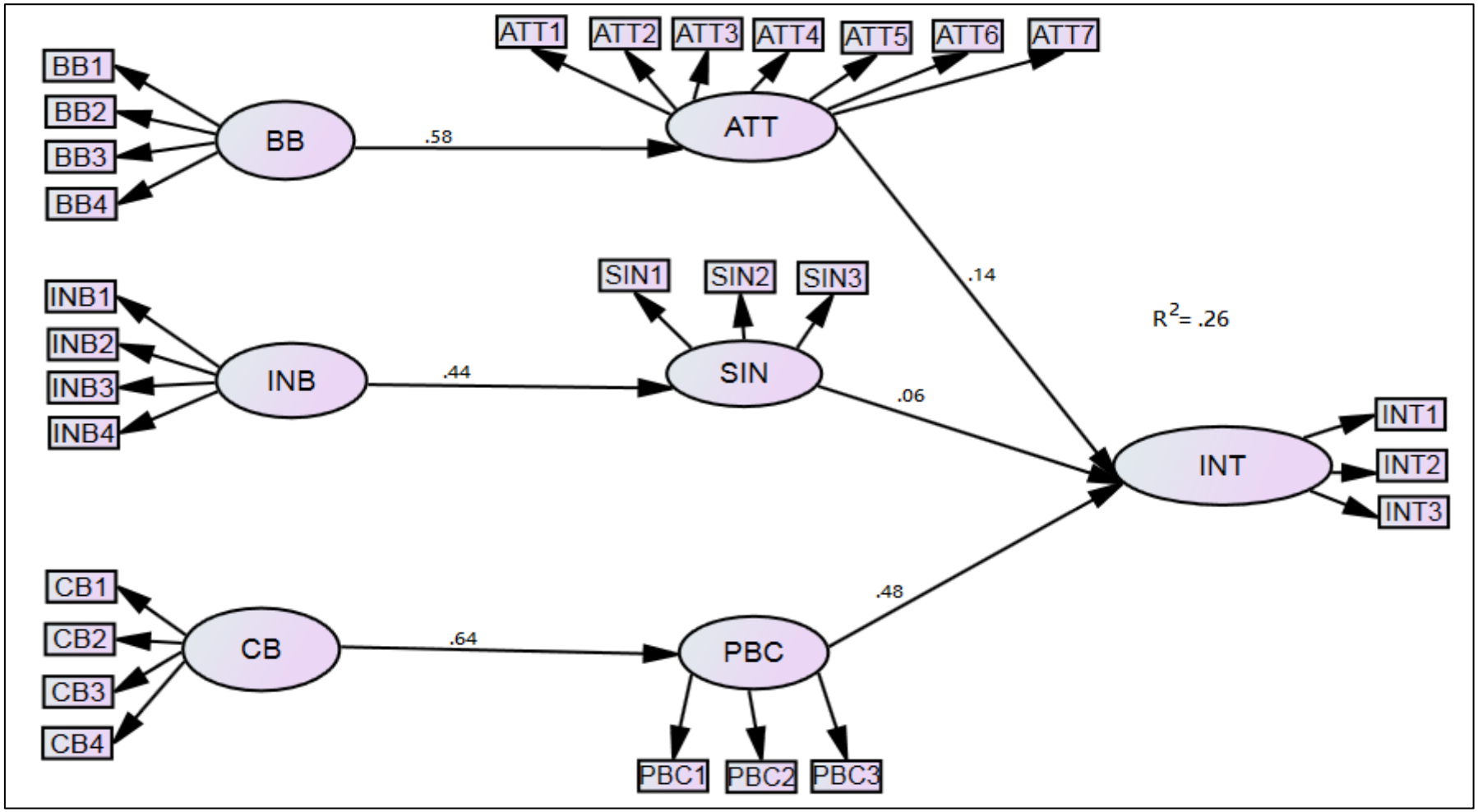


Figure 4.1 TPB model

Goodness-of-fit statistics: x2=1569.983, df= 334, p<0.001, x2 /df= 4.701, RMSEA= 0.069, CFI= 0.954; TLI= 0.948. Note. BB: behavioural beliefs; NB: normative beliefs; CB: control beliefs; ATT: attitude; SIN: subjective injunctive norm; PBC: perceived behavioural control; INT: intention.

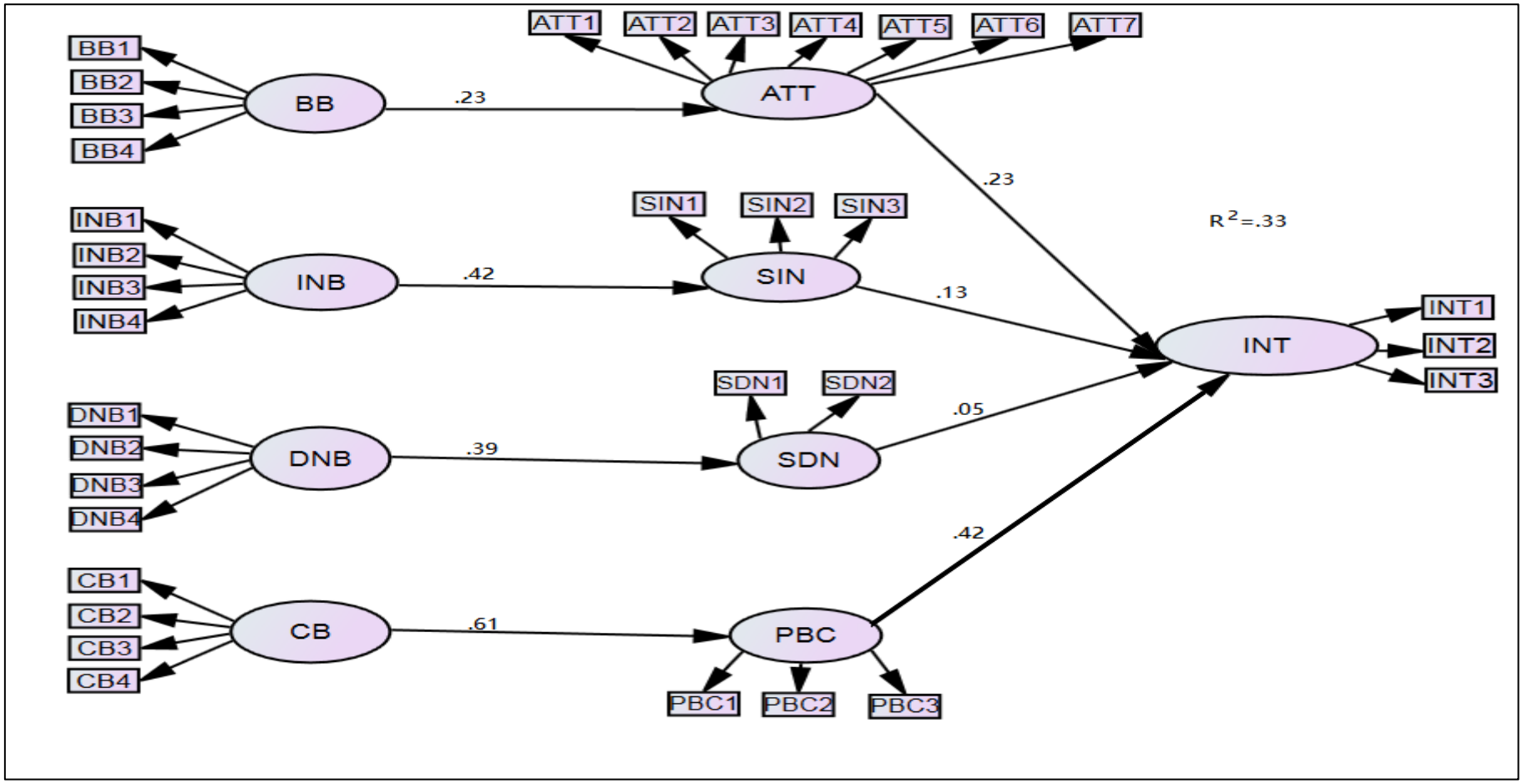


Figure 4.2 Updated TPB model

Goodness-of-fit statistics: $x^{2=}$ 1833.10, df= 504, p<0.001, x^2 /df= 3.636, RMSEA= 0.066, CFI= 0.954, TLI= 0.950. Note. BB: behavioural beliefs; INB: injunctive normative beliefs; DNB: descriptive normative beliefs; CB: control beliefs; ATT: attitude; SIN: subjective injunctive norm; SDN: subjective descriptive norm; PBC: perceived behavioural control; INT: intention

As a next step, the construct 'green hotel knowledge' was added as an antecedent to the model to test the explanatory power of the updated TPB model to travellers' intention to stay at green hotels (Figure 4.3). As shown in Table 4.20, the extended model displayed higher explanatory power (extended TPB: adjusted R^2 for intention= 0.42, vs. updated TPB: adjusted R^2 for intention= .33), and relatively better fit (extended TPB: x^2 /df= 3.488, RMSEA= 0.056 vs. updated TPB x^2 /df= 3.636, RMSEA= 0.066). In this model, again, the path between SDN and INT was not significant. While GHK became a very strong indicator to INT, second to PBC, the paths between ATT and INT, as well as SIN to INT, remained significant. This could be a verification that the inclusion of SDN would strengthen the associations between ATT and INT as well as SIN and INT. Many researchers have tried to complement the TPB model by adding new construct(s) to better predict a broader array of human behaviours in several domains (Chen & Peng, 2012; De Leeuw et al., 2015; Han et al., 2010). Consistent with these studies, the current study finding indicated that adding green hotel knowledge to the TPB model increased the prediction of intentions to stay at a green hotel and seemed to be developed to the TPB model. Consequently, the extended TPB model was used to explain the proposed associations among the TPB constructs.

Table 4.20

Explanatory Power and Fit Indices of Models

Fit Indices and R^2	**Recommended value [a]**	**TPB**	**Updated TPB**	**Extended TPB**
x^2		1569.983	1833.10	2064.492
Df		334	504	592
x^2/df	≤2–≥5	4.701	3.636	3.488
RMSEA	≤0.08	0.069	0.066	0.056
CFI	≤0.90	0.954	0.954	0.957
TLI	≤0.90	0.948	0.950	0.951
R^2 (adjusted)		0.26	0.33	0.42

[a] Recommended values based on Hair et al. (2010).

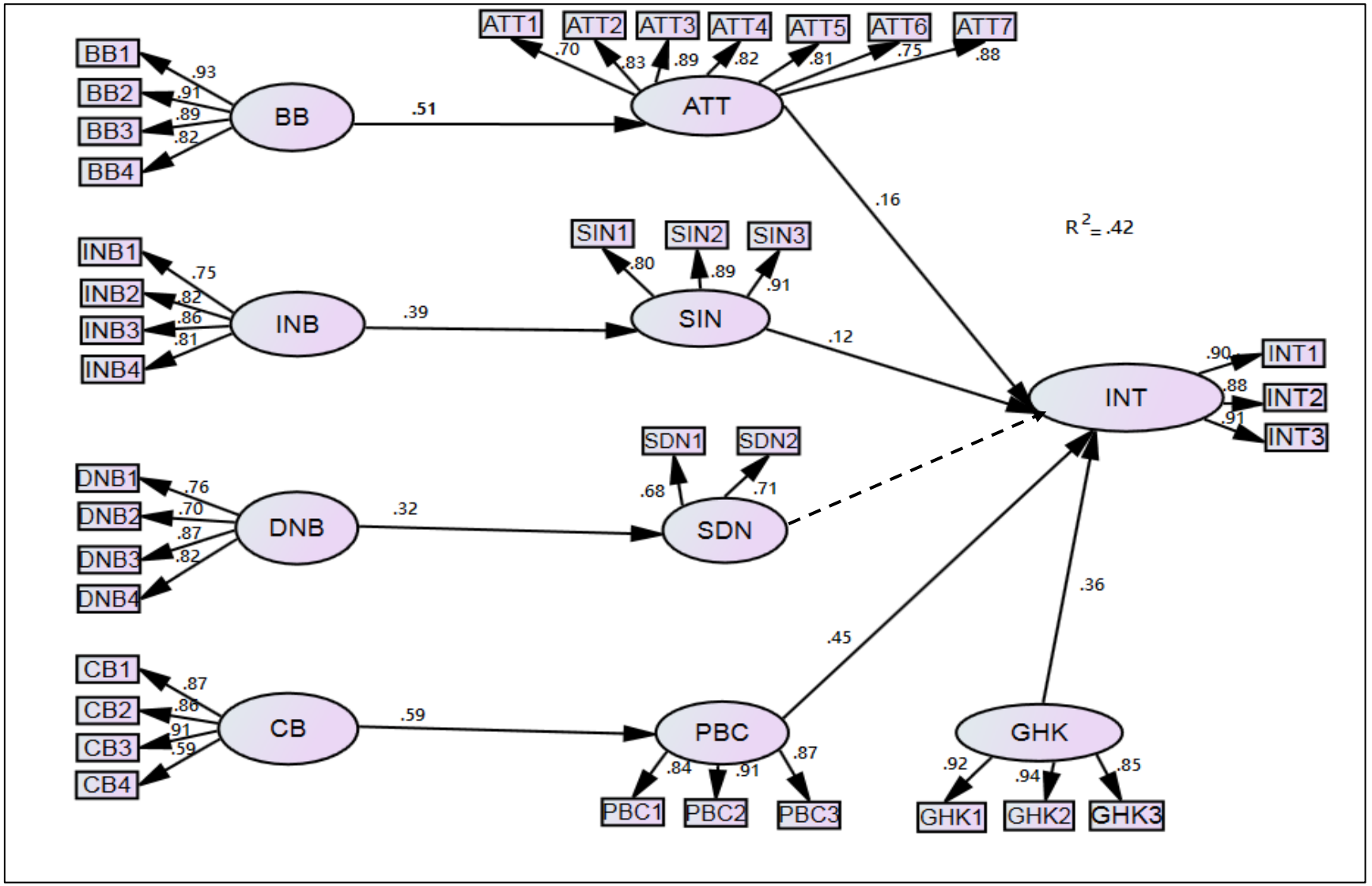


Figure 4.3 Extended TPB model

Goodness-of-fit statistics: $x^{2=}$ 2064.492, df= 592, p<0.001, x^2 /df= 3.488, RMSEA= 0.056, CFI= 0.957, TLI= 0.951. Note. BB: behavioural beliefs; INB: injunctive normative beliefs; DNB: descriptive normative beliefs; CB: control beliefs; ATT: attitude; SIN: subjective injunctive norm; SDN: subjective descriptive norm; PBC: perceived behavioural control; GHK; green hotel knowledge; INT: intention

4.3.7 Hypotheses results

The results of testing the nine hypotheses are discussed in this section. In the proposed research model, the structural relationships between behavioural beliefs (BB) and attitude (ATT), between injunctive normative beliefs (INB) and subjective injunctive norms (SIN), between descriptive normative beliefs (DNB) and subjective descriptive norms (SDN) and between control beliefs (CB) and perceived behavioural control (PBC) were hypothesised (H1 to H4). In addition, four hypotheses examined how the direct constructs of the TPB model (attitude (ATT), subjective injunctive norms (SIN), subjective descriptive norms (SDN) and perceived behavioural control (PBC) and intentions to stay at a green hotel (INT) (H5 to H8). Lastly, a hypothesis was developed to examine the influence of green hotel knowledge (GHK) on intention to stay at a green hotel (INT) (H9). As presented in Table 4.21, parameter estimates were inspected to assess the hypothesised relationships among the constructs. Estimates propose that eight out of nine hypothesised paths were significant, demonstrating support for the eight hypotheses. The findings are summarised below.

Table 4.21

Structural Equation Modelling Results – Extended Model (n=771)

Paths	Coefficient	T-value	Hypotheses
BB → ATT	.51	18.179	H1: Supported
INB → SIN	.39	9.225	H2: Supported
DNB → SDN	.32	6.531	H3: Supported
CB → PBC	.59	26.217	H4: Supported
ATT → INT	.16	3.763	H5: Supported
SIN → INT	.12	2.116	H6: Supported
SDN → INT	.03	0.677	H7: Not Supported
PBC → INT	.45	13.344	H8: Supported
GHK → INT	.36	10.458	H9: Supported

Note. BB: behavioural beliefs; INB: injunctive normative beliefs; DNB: descriptive normative beliefs; CB: control beliefs; ATT: attitude; SIN: subjective injunctive norm; SDN: subjective descriptive norm; PBC: perceived behavioural control; GHK; green hotel knowledge; INT: intention.

H1: Travellers' behavioural beliefs will have a positive and significant impact on their attitudes about staying at a green hotel.

The data supported hypothesis 1. The estimates of the standardised coefficients showed that the linkage between behavioural beliefs (BB) and attitude (ATT) (β =0.51; t value = 18.179, p< 0.01) was positive and significant. This finding suggests that travellers' behavioural beliefs are a significant predictor of their attitudes towards staying at a green hotel. As for the effect size of the behavioural beliefs on attitudes, it was evaluated using Hopkins (1997) guidelines. According to the guidelines, the linkage between behavioural beliefs (BB) and attitude (ATT) (β =0.51) is considered large.

H2: Travellers' injunctive normative beliefs will have a positive and significant impact on their subjective injunctive norms towards staying at a green hotel.

Hypothesis 2 was supported by the data. As shown in Table 4.21, the parameter estimates of the standardised coefficients showed that the linkage between injunctive normative beliefs and subjective injunctive norms was positive and significant (β=0.39; t value =9.225). This result indicates that travellers' injunctive normative beliefs are substantial in predicting their subjective injunctive norms regarding staying at a green hotel. As for the effect size of the injunctive normative beliefs on subjective injunctive norms, the linkage between them (β =0.39) is considered moderate.

H3: Travellers' descriptive normative beliefs will have a positive and significant impact on their subjective descriptive norms towards staying at a green hotel.

The estimates of the standardised coefficients showed that the linkage between descriptive normative beliefs (DNB) and subjective descriptive norms (SDN) was positive and significant (β=0.32 t=6.531, p<0.01). Therefore, hypothesis 3 was supported by the data. This result indicates that travellers' descriptive normative beliefs are significant in predicting their subjective descriptive norms regarding staying at a green hotel. As for the effect size of the descriptive normative beliefs

on subjective descriptive norms, the linkage between them (β =0.32) is considered moderate.

H4: Travellers' control beliefs will have a positive and significant impact on their perceived behavioural control towards staying at a green hotel.

Hypothesis 4 was supported by the data. As shown in Table 4.21, the estimates of the standardised coefficients showed that the linkage between control beliefs and perceived behavioural control was positive and significant (β=0.59; t=26.217, p<0.01). This result indicates that control beliefs are significantly associated with travellers' perceived behavioural control to stay at green hotels. As for the effect size of control beliefs on perceived behavioural control (β=0.59), it was found to be large based on Hopkins (1997) guidelines.

H5: Travellers' attitudes will have a positive and significant impact on their intentions to stay at a green hotel.

The results revealed that there were positive influences of attitudes (ATT) on intentions to stay at green hotels (VI) (β=0.16; t=3.763, p<0.01), therefore, hypothesis 5 was supported. The support found for this hypothesis implies that an increase in favourable attitude will increase in the likelihood of staying at a green hotel. As for the effect size of attitudes on intentions to stay at green hotels (β=0.16), it was found to be small based on Hopkins (1997) guidelines.

H6: Travellers' subjective injunctive norms will have a positive and significant impact on their intentions to stay at a green hotel.

Hypothesis 6 was supported by the data. The results revealed that subjective injunctive norms had a positive influence on intentions to stay (β=0.12; t=2.116, p<0.01). Hence, this result suggests that travellers' intentions to stay at a green hotel is positively associated with the pressure of what significant others expect them to do. As for the effect size of subjective injunctive norms on intentions to stay at green hotels, it was found to be small (β=0.12) based on Hopkins (1997) guidelines.

H7: Travellers' subjective descriptive norms will have a positive and significant impact on their intentions to stay at a green hotel.

Hypothesis 7 was not supported by the data. As shown in Table 4.21, the parameter estimates (β=0.03; t=.677) indicated that the subjective descriptive norms did not have an impact on intentions to stay at green hotels. Hence, this result suggests that travellers' intention to stay at green hotels is not associated with the pressure of how significant others behave in regards to staying at a green hotel. As for the effect size of subjective descriptive norms on intentions to stay at green hotels using Hopkins (1997) guidelines, it was also found to be minimal (β=0.03), thus having no significant impact on intentions.

H8: Travellers' perceived behavioural control will have a positive and significant impact on their intentions to stay at a green hotel.

Testing the impact of perceived behavioural control revealed that there was a strong and positive influence of PBC on intentions to stay at green hotels (β=0.45; t=13.344, p<0.01), therefore hypothesis 8 was supported by the data. This finding demonstrates that travellers' intentions to stay at a green hotel is positively associated with their perceptions of control over the decision to stay at a green hotel. Further, perceived behavioural control was found to have the greatest direct effect on intention among the variables. The results of the effect size of perceived behavioural control using Hopkins (1997) guidelines indicated that perceived control (β=0.45) had a moderate effect on intentions to stay at green hotels.

H9: Travellers' green hotel knowledge will have a positive and significant impact on their intentions to stay at a green hotel.

The results revealed a strong positive influence of GHK on intention to stay at a green hotel (β=0.36; t=10.458, p<0.01), therefore hypothesis 9 was supported. This result indicates that processing green hotel knowledge will significantly impact travellers' intentions to stay at green hotels. Relying on Hopkins (1997) guidelines, the results revealed that green hotel knowledge (β=0.36) had a moderate effect on intentions.

4.3.8 The intervention effect

As discussed in Section 3.3.3, pictorial elements using positive and negative framing were employed to explore participants' responses to these images. These images were used as a research device to examine different responses during the research process. These images were nominated by the three focus groups. Further investigations were executed using multi-group analysis using SEM in AMOS to seek evidence of the intervention effects across the three sample groups (i.e., the control group (CG), the positively-framed image group (PFI) and the negatively-framed image group (NFI)) were compared simultaneously to explore the impact of the intervention (see Section 3.4.2.7).

The factor loadings between the three models were examined to provide a more precise estimate of the difference in the relationships between the three groups. Specifically, each particular parameter of interest in the three models was constrained to allow a comparison of their chi-square difference (Hair et al., 2010). Following that, analysis of variance (ANOVA) and post-hoc analysis tests were conducted to examine participants' responses.

4.3.8.1 Multi-group analysis using SEM

To test the impact of the intervention, a multi-group analysis was conducted to examine path differences across the control group (CG), the positively-framed image group (PFI) and the negatively-framed image group (NFI). The measurement invariance was tested and results indicated that the three groups were partially invariant. Next the latent model of each sample was tested separately and confirmed the model fit for each group. Following that, a multi-group analysis was conducted on the three datasets together. After constraining the specific paths in the model, the regression weights were compared between the three groups (Gaskin, 2016). The chi-square difference test is the empirical means to assess if between-group constraints are statistically significant. Table 4.22 presents the path differences across the three groups. The results suggested a varying strength of the relationship between the constructs in the TPB model among the participants from the three groups.

Firstly, comparing the CG and the PFI group. The results indicate that all paths were found insignificant except for the path from green hotel knowledge (GHK) to intentions to stay (INT). The relationship between green hotel knowledge and future intentions is stronger in the PFI group than in the CG (difference = .26, $p <$ .01).

As for the CG and the NFI group, the path from behavioural beliefs (BB) to attitude (ATT) is significantly stronger in the CG than in the NFI group indicating that the relationship between behavioural beliefs and attitude is stronger in the CG (difference = .19, $p < .01$). In addition, the path from attitude (ATT) to intention to stay (INT) is significantly stronger in the CG than in the NFI group (difference = .24, $p < .01$). This revealed significant differences in intentions to stay in terms of favourable attitudes between the two groups.

Finally comparing the PFI group with the NFI group, the strengths of four paths were found significantly different. The path from behavioural beliefs (BB) to attitude (ATT) is significantly stronger in the PFI group than in the NFI group (difference = .22, $p < .01$). In addition, the path from attitude (ATT) (difference = .25, $p < .01$), the path from perceived behavioural control (PBC) (difference = .27, $p < .01$) and green hotel knowledge (GHK) (difference = .25, $p < .01$) to intention to stay (INT) were significantly stronger in the PFI group than in the NFI group. This indicates that the strength of the relationship between these three constructs and intention to stay at green hotels is weaker in the NFI group in comparison to the PFI group.

Table 4.22

Multi-group Analysis for Three Groups

	CG		PFI		NFI		CG vs. PFI		CG vs. NFI		PFI vs. NFI	
Paths	**Path Coefficients**	**Critical Ratios**	**Path Coefficients**	**Critical Ratios**	**Path Coefficients**	**Critical Ratios**	**Path Difference**	**p-Value**	**Path Difference**	**p-Value**	**Path Difference**	**p-Value**
BB → ATT	.78	24.56***	.81	26.02***	.59	15.20***	.03	.09	.19	***	.22	***
INB → SIN	.23	3.83***	.15	3.56***	.19	3.36***	.08	.32	.04	.26	.04	.29
DNB → SDN	.77	19.27***	.84	24.56***	.74	20.38***	.07	.08	.03	.06	.10	.08
CB → PBC	.79	25.61***	.77	19.27***	.76	22.81***	.02	.23	.03	.25	.01	.19
ATT → INT	.35	9.34***	.36	11.47***	.11	3.51***	.01	.56	.24	***	.25	***
SIN → INT	.18	3.36***	.23	3.83***	.21	3.25***	.05	.19	.03	.22	.02	.23
SDN → INT	.03	.70	.04	.71	.02	.50	.01	.52	.01	.62	.02	.64
PBC → INT	.24	6.49***	.39	12.26***	.12	3.67***	.15	.12	.12	.11	.27	***
GHK → INT	.11	3.51***	.37	11.45***	.12	3.62***	.26	***	.17	.07	.25	***

Note. BB: behavioural beliefs; INB: injunctive normative beliefs; DNB: descriptive normative beliefs; CB: control beliefs; ATT: attitude; SIN: subjective injunctive norm; SDN: subjective descriptive norm; PBC: perceived behavioural control; GHK; green hotel knowledge; INT: intention

4.3.8.2 Group comparison using ANOVA

To provide deeper insight into participants' responses, further analyses were conducted using ANOVA and post-hoc tests as discussed in Section 3.4.2.7. The CG and the two intervention groups (PFI and NFI) were compared simultaneously using construct means to explore the impact of the intervention. According to table 4.23, the results of ANOVA tests reveals a statistically significant difference in all variables except injunctive and descriptive beliefs in addition to injunctive and descriptive norms between the control group and the two intervention groups (see table 4.24 for multiple comparisons for TPB constructs). In addition, Table 4.25 presents the effect size for ANOVA tests which ranged between small and high.

Starting with behavioural beliefs (BB), there was a statistically significant difference at the $p < .05$ level in behavioural beliefs scores ($F(2,769) = 5.410$) between the three groups. Further, post-hoc analysis using the Tukey HSD test indicated that the BB scores between CG (M=34.41, SD=6.74) and NFI group were not significantly different, but both were significantly lower than the scores of the PFI group. This indicated that the PFI group reported more positive behavioural beliefs. The effect size, calculated using eta squared, was 0.01, indicating that the actual difference in mean scores between the groups is small.

As for control beliefs (CB), the results showed that there was a statistically significant difference at the $p < .05$ level in CB scores ($F(2,769) = 6.050$) for the three groups. Post-hoc comparisons using the Tukey HSD test indicated the PFI group (M=36.98, SD=6.67) perceived more positive control over protecting the environment by staying at green hotels than the CG (M=34.52, SD=6.74) and NFI group (M=34.85, SD=6.89). The effect size, calculated using eta squared, was 0.02 indicating that the actual difference in mean scores between the groups is small.

For attitude (ATT), the results showed that there was a statistically significant difference at the $p < .05$ level in ATT scores ($F(2,769) = 5.24$) between the three groups. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for attitudes for the NFI group (M=5.57, SD=.79) was significantly lower

compared to the PFI group (*M*=5.85, *SD*=.807) and the CG (*M*=5.74, *SD*=.814). The effect size, calculated using eta squared, was 0.02, indicating that the actual difference in mean scores between the groups is small.

As for perceived behavioural control (PBC), the results indicated that there was a statistically significant difference at the $p < .05$ level in PBC scores ($F (2,769) = 34.722$) for the three groups. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for PBC for the PFI group (*M* =5.92, *SD*=.858) was significantly higher compared to the control group (*M*=5.43, *SD*=.753) and the NFI group (*M*=5.27, *SD*=.970). The effect size, calculated using eta squared, was 0.09, which is moderate.

As for green hotel knowledge (GHK), the results showed that there was a statistically significant difference at the $p < .05$ level in GHK scores $F (2,769) = 68.493$ for the three groups. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for GHK for the PFI group (*M* = 5.26, *SD* = .969) was significantly higher than the control group (*M*=4.82, *SD*= 1.193) and the NFI group (*M* =4.06, *SD*=1.370). The effect size, calculated using eta squared, was .15, which is high.

For intentions (INT), the results indicated that there was a statistically significant difference at the $p < .05$ level in intention scores ($F (2,769) =29.724$) for the three groups. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for INT for the PFI group (*M*= 5.92, *SD*= .858) was significantly higher compared to the control group (*M*=5.43, *SD*=.753) and the NFI group (*M*=5.27, *SD*=.970). The effect size, calculated using eta squared, was 0.07, which is moderate.

For injunctive and descriptive normative beliefs, subjective injunctive and descriptive norms, the results indicated that there were no differences with regards to these constructs between the three groups.

Table 4.23

One-Way Analysis of Variance of the TPB Constructs

	Sum of Squares	Df	Mean Square	F	sig
Behavioural Beliefs (BB)	370.940	2	852.970	5.410	.000
Injunctive Normative Beliefs (INB)	4.163	2	3.165	1.642	.194
Descriptive Normative Beliefs (DNB)	2.280	2	5.402	2.598	.078
Control Beliefs (CB)	928.955	2	464.477	6.050	.002
Attitude (ATT)	10.488	2	5.244	8.082	.000
Subjective Injunctive Norms (SIN)	2.782	2	1.391	1.213	.298
Subjective Descriptive Norms (SDN)	2.054	2	1. 273	1.417	.209
Perceived Behavioural Control (PBC)	54.549	2	27.274	29.742	.000
Green Hotel Knowledge (GHK)	193.765	2	96.883	68.493	.000
Intention to Stay (INT)	60.254	2	30.127	34.722	.000

Table 4.24

Multiple Comparisons of TPB Constructs

Dependant Variable	(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
Behavioural Beliefs (BB)	CG	PFI	-2.56*	.560	.000
		NFI	.42	.599	.807
	PFI	CG	2.56*	.560	.000
		NFI	2.14*	.599	.000
	NFI	CG	-.42	.599	.807
		PFI	-2.14*	.599	.000
Injunctive Normative Beliefs (INB)	CG	PFI	-.45	.753	.273
		NFI	1.06	.752	.165
	PFI	CG	.45	.753	.273
		NFI	1.52	.752	.102
	NFI	CG	-1.06	.752	.165
		PFI	-1.52	.752	.102
Descriptive Normative Beliefs (DNB)	CG	PFI	1.80	.753	.281
		NFI	1.17	.752	.176
	PFI	CG	-1.80	.753	.281
		NFI	.36	.752	.116
	NFI	CG	-1.17	.752	.176
		PFI	-.36	.752	.116
Control Beliefs (CB)	CG	PFI	-2.46*	.768	.005
		NFI	-.33	.767	.115
	PFI	CG	2.46*	.768	.005
		NFI	2.13*	.767	.004
	NFI	CG	.33	.767	.115
		PFI	-2.13*	.767	.004
Attitude (ATT)	CG	PFI	-0.11	.753	.281
		NFI	0.17*	.752	.046
	PFI	CG	0.11	.753	.281
		NFI	0.28*	.752	.016
	NFI	CG	-.17*	.752	.046
		PFI	-.28*	.752	.016
Subjective Injunctive Norms (SIN)	CG	PFI	-.04	.093	.888
		NFI	-.14	.093	.282
	PFI	CG	.04	.093	.888
		NFI	-.09	.093	.542
	NFI	CG	.14	.093	.282

Table 4.24 *Continued*

Dependant Variable	(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
		PFI	.09	.093	.542
Subjective Descriptive Norms (SDN)	CG	PFI	-.15	.103	.338
		NFI	.13	.103	.376
	PFI	CG	.15	.103	.338
		NFI	.21	.103	.108
	NFI	CG	-.13	.103	.376
		PFI	-.21	.103	.108
Perceived Behavioural Control (PBC)	CG	PFI	-.49*	.768	.001
		NFI	.16	.767	.115
	PFI	CG	.49*	.768	.001
		NFI	.65*	.767	.000
	NFI	CG	-.16	.767	.115
		PFI	-.65*	.767	.000
Green Hotel Knowledge (GHK)	CG	PFI	-.44*	.104	.000
		NFI	.76*	.104	.000
	PFI	CG	.44*	.104	.000
		NFI	1.2*	.104	.000
	NFI	CG	-.76*	.104	.000
		PFI	-1.2*	.104	.000
Intention to Stay (INT)	CG	PFI	-.49*	.081	.000
		NFI	.16	.081	.127
	PFI	CG	.49*	.081	.000
		NFI	.65*	.081	.000
	NFI	CG	-.16	.081	.127
		PFI	-.65*	.081	.000

* The mean difference is significant at the 0.05 level.

Table 4.25

The Effect Size for ANOVA Tests Summary

Construct	**Effect Size**	**Cohen's Guidelines**
Behavioural Beliefs (BB)	.01	Small
Control Beliefs (CB)	.02	Small
Attitudes (ATT)	.02	Small
Perceived Behavioural Control (PBC)	.07	Moderate
Green Hotel Knowledge (GHK)	.15	High
Intention (INT)	.09	Moderate

4.3.9 The demographics effect

Looking at the effect of the demographics (gender, age, education level and income), independent samples t-test and ANOVA tests were conducted to compare the Intention to stay (INT) score among the different groups. Firstly, an independent sample t-test was conducted to compare the intention score for males and females. The results indicated that males and females differed in their intentions to stay at green hotels. The mean score in intentions for females (*M*= 5.643, *SD*= .934) was slightly higher than males (*M* =5.410, *SD*= .568). Additionally, there was a significant difference between females and males in terms of their intentions to stay at a green hotel (*t* (767) = 3.28, *p* = .001).

A one-way between-groups analysis of variance was conducted to explore the impact of age on the intentions to stay at green hotels. Participants were divided into six groups according to their age (Under 20, 20-29; 30-39; 40-49; 50-59 and 60 and above). The results showed that mean scores in intentions for the lowest age group (under 20 years) were slightly higher than other age groups. However, as shown in Table 4.26, the results of the ANOVA indicated that there was no significant difference among age groups (intention: F (5, 765) =1.145, *p*=.211).

Table 4.26

One-Way Analysis of Variance of Intentions to Stay by Participants' Age

Variable	**Age**	**Mean (*SD*)**	***F*-Value**	***p* –Value**
Intention	Under 20	5.768 (0.869)	1.145	.211
	20-29 years	5.536 (0.939)		
	30-39 years	5.603 (0.960)		
	40-49 years	5.419 (0.994)		
	50-59 years	5.505 (0.999)		
	60 and above	5.576 (1.025)		

The impact of gross income was tested and the results indicated that there was no statistically significant difference among different groups in regards to their intentions to stay at a green hotel. Participants were divided into seven groups according to their gross income (less than AU$ 20,000, AU$20,000 - AU$49,999, AU$50,000 - AU$79,999, AU$80,000 - AU$109,999; AU$110,000 - AU$139,999, AU$140,000 - AU$169,999 and more than AU$170,000). As shown in table 4.27, the mean scores for household gross income groups indicated the low income group had slightly lower mean values for intentions to stay at a green hotel (*M* Less than AU$20,000 = 5.366, *SD*= 1.067). As for the results of the ANOVA tests, they did not yield statistically significant differences in intentions to among different income groups (F (6, 764) = .537, *p* =.756).

Table 4.27

One-Way Analysis of Variance of Intentions to Stay by Participants' Income

Variable	**Income**	**Mean (*SD*)**	***F*-Value**	***p*-Value**
Intention	Less than AU$20,000	5.366 (1.067)	.537	.756
	AU$20,000 - AU$49,999	5.523 (1.013)		
	AU$50,000 - AU$79,999	5.565 (0.974)		
	AU$80,000 - AU$109,999	5.595 (0.922)		
	AU$110,000 - AU$139,999	5.607 (0.826)		
	AU$140,000 - AU$169,999	5.449 (1.047)		
	More than AU$170,000	5.641 (0.985)		

A one-way between-groups analysis of variance was conducted to explore the impact of education on the intentions to stay at green hotels. Mean scores for education groups are shown in Table 4.28. With regards to the results of the ANOVA tests, they did not yield statistically significant differences in intentions among education groups (Intention to stay: F (4, 776) =.3.644, *p* =.006).

Table 4.28

One-Way Analysis of Variance of Intentions to Stay by Participants' Education

Variable	Income	Mean (*SD*)	*F*-Value	*p* -Value
Intention	Less than High School	5.583 (1.218)	.551	.770
	High School	5.451 (1.056)		
	Vocational Training	5.284 (1.034)		
	Undergraduate Degree	5.598 (0.949)		
	Post Graduate Degree	5.684 (0.826)		
	Other	5.449 (0.819)		

4.4 Chapter Summary

This chapter reported the results of analyses of the research data in the qualitative and quantitative research studies. First, this chapter presented the findings from the elicitation and pilot studies, which were used to build the research survey instrument. This final instrument was distributed online through Qualtrics™, and the quantitative data were subjected to analysis using factor analyses and structural equation modelling. This was followed by model comparisons to identify the model with the best fit in addition to the best explanatory power. Hypotheses testing was conducted in the later stage. The intervention effect was examined using multi-group and ANOVA analysis and between the control and the two different intervention groups. Finally, the impact of demographics on travellers' intention to stay at green hotels was presented.

CHAPTER 5

DISCUSSION

5.1 Introduction

The results reported in the previous chapter examined the research model and outcome of hypotheses put forward in the literature review. The use of SEM, multi-group analysis and ANOVA, indicated the plausibility of the research model to the study data set. This chapter discusses the results through seven main sections. First, the results of the elicitation study are discussed. Second, the data analyses from the quantitative study are comprehensively addressed with a focus on the research hypotheses and the relationships in the research model. Third, the impact of the intervention on the TPB extended model is discussed. Fourth, the impact of demographics is presented. Fifth, the theoretical and practical implications of this study are discussed. The limitations and directions for future research arising from the study are provided in the final two sections.

5.2 Elicitation Study

The present research employed an elicitation study to explore the underlying beliefs that inform Australian travellers' choice of green hotel accommodation. Limited research has been conducted previously regarding travellers' decision formation in the green hotel context (Rahman et al., 2015). The first research question of this study was used to develop and validate a robust model that provides a deeper understanding of travellers' pro-environmental behaviour towards staying at a green hotel.

Research Question 1: What are the reported behavioural, normative and control beliefs, and additional constructs that underpin travellers' intentions to stay at a green hotel?

As a result, the elicitation study identified the behavioural, normative, and control beliefs and 'green hotel knowledge' as an additional construct that would contribute to the formation of Australian travellers' purchasing decisions related to staying at green hotels. The underlying foundation of beliefs provided further

descriptions needed to gain substantive information about determinants of intention to stay at green hotels (Ajzen, 1991).

Within the context of TPB, six behavioural beliefs were identified: (1) protecting the environment; (2) fulfilling environmental obligations; (3) assisting in securing a future for next generations; (4) staying at a healthy environment; (5) greenwashing; and (6) compromising on comfort. These beliefs have been reported in research as factors that affect environmental consumer behaviour in different contexts (De Leeuw et al., 2015; Han & Hwang, 2016; Kim & Han, 2010). In a study by De Groot and Steg (2007) regarding environmental beliefs, participants linked the consequences of environmental problems with their own actions. This can be related to their belief that by acting in a pro-environmental manner, they may contribute to protecting the planet and leaving a better environment for future generations (Lee et al., 2010).

As for personal benefits, participants indicated that being in a healthy environment was one of the benefits of staying in a green hotel. This was supported by the literature as studies indicated that consumers perceive staying at a green hotel or a green restaurant as experiencing a healthy, environmentally friendly atmosphere (Han et al., 2010; Kim & Han, 2010, Jang et al., 2015).

Regarding personal concerns, results indicated that consumers were hesitant to stay at a green hotel due concerns about greenwashing. Consumers in previous studies were found to be sceptical about the hotels' environmental claims (Baker et al., 2014). Specifically, Rahman et al. (2015) demonstrated that promoting green practices without integrating them holistically throughout the hotel can make consumers sceptical. Participants were also concerned with compromising on their luxury and comfort when staying in a green hotel. The literature indicates that hotel guests might perceive green practices as involving a sacrifice of luxury and comfort (Baker et al., 2014; Kang et al., 2012) as this sector establishes its business on perceived luxury and indulgence. For instance, a study by Line and Hanks (2015) reported a significant negative relationship between consumers' beliefs about luxury and their attitudes and behaviours towards staying in a green hotel. Some green initiative implemented in hotels give the impression of compromised quality (Rahman & Reynolds, 2016). Moreover, in a relevant study,

Rahman et al. (2015) found that consumers linked green hotels with lower levels of comfort and inconvenience.

Regarding normative beliefs, three sources were identified as referents who would support staying and would stay at a green hotel: (1) family and relatives; (2) younger generation; and (3) colleagues, which were consistent with other TPB studies (Han et al., 2010; Han & Kim, 2010; Kim & Han, 2010). However, this study found that family and relatives were the main group reported as supporting staying in a green hotel. The younger generations have also been identified as key supportive referents, complementing recent research highlighting their potentially persuasive role in encouraging environmental purchasing decisions (Muralidharan et al., 2016). In their study, Fielding and Head (2012) associated young Australians' environmental behaviour with their environmental concern and knowledge. In addition, De Leeuw et al. (2015) stated: "Young people are a critical stakeholder, since they bear the burden of past and current negligence towards the environment. At the same time, they represent a powerful engine for behaviour change" (p.128).

For the control beliefs, four dimensions were identified: (1) location; (2) participating in environmental certification and eco-labelling; (3) visible communication; and (4) price. Similar findings have been reported in previous TPB studies in the green hotel context (Han et al., 2010; Han & Kim, 2010; Kim & Han, 2010). Another major facilitator to emerge was the importance of standardisation of environmental programs in such hotels. More specifically, in the green hotel context, hotel managers should affiliate with third-party certifications that ensure the hotel meets certain standards, which will assist in confirming the hotel's environmental credibility in the eyes of consumers (Rahman et al., 2015). Congruent with the identified facilitators, the main barrier to staying in a green hotel was the high price, which is a common finding in previous TPB studies (Han et al., 2010; Han & Kim, 2010; Kim & Han, 2010). In fact, consumers associate green hotels with higher price premiums (Rahman & Reynolds, 2016). In hotel studies, Manaktola and Jauhari (2007) highlighted that only 15 per cent of consumers were willing to pay premiums for environmental practices.

As for the additional constructs highlighted through the elicitation study, lack of knowledge about the implementation of pro-environmental practices emerged as a significant factor that impedes travellers' decisions concerning staying at such hotels. Green Hotel Knowledge, which can be added to the TPB model, has been investigated in the green hotel sector, and the results demonstrated that consumers' knowledge about green hotels and practices would influence their intentions and planning processes (Chen & Peng, 2012). In green restaurant studies, Hu et al. (2010) reported that consumer knowledge of environmental initiatives was a significant determinant of intention to visit green restaurants. In the same context, Jang et al. (2011) indicated that the primary reason for consumers not visiting green restaurants was a lack of knowledge about such restaurants. Therefore, in order to take a pro-environmental action (i.e. staying at a green hotel), consumers need relevant knowledge regarding the green programs implemented in such hotels.

5.3 Quantitative Study

Testing the model and hypotheses of the study was carried out in the quantitative study. The research hypotheses were tested to enable the development of an explanation of the relationship between each TPB construct in addition to green hotel knowledge and travellers' willingness to stay at a green hotel. This was followed by testing the intervention impact to show differences in the influence of the positive and negative pictorial images on travellers' responses and their willingness to stay at green hotels. Finally, the impacts of demographic characteristics on intention formation in the green hotel context were examined. The following sections present the discussion for the quantitative study.

5.3.1 Hypotheses discussion

The nine hypotheses are discussed in this section. In the proposed research model, the structural relationships between the TPB indirect constructs (behavioural beliefs, injunctive normative beliefs, descriptive normative beliefs, and control beliefs) with their associated direct constructs (attitudes, subjective injunctive norms, subjective descriptive norms and perceived behavioural control)

were hypothesised (H1, H2, H3, and H4). Four hypotheses involved the TPB direct constructs and their impact on travellers' intentions to stay at green hotels (H5, H6, H7, and H8). Lastly, one hypothesis was developed to examine the relationship between green hotel knowledge and willingness to stay at such hotels (H9).

5.3.1.1 Travellers' behavioural beliefs (attitudinal element)

According to Fishbein and Ajzen (2010), behavioural beliefs refer to the perceived positive or negative outcomes of conducting the behaviour. The TPB model suggests that these accessible beliefs, combined with their evaluative components, will affect attitudes. In other words, individuals positively or negatively evaluate the attributes associated with the behaviour, leading directly to the formation of the attitudes (Ajzen, 1991).

Research Question 2: Do travellers' behavioural beliefs have an impact on their attitude to stay at a green hotel?

H1: Travellers' behavioural beliefs will have a positive and significant impact on their attitudes about staying at a green hotel.

Hypothesis 1 was formulated to address the second research question regarding the effect of behavioural beliefs on travellers' attitude. The first hypothesis examined the relationship between four behavioural beliefs, namely: helping to protect the environment, contributing to fulfilling my environmental obligations, assisting in securing a future for next generations, and experiencing a healthy environment, and attitudes towards staying at a green hotel (H1).

The results support this hypothesis, showing that a significant positive relationship exists between behavioural beliefs and attitudes towards staying at a green hotel. In other words, as anticipated, the more deeply travellers acknowledge the importance of staying at a green hotel, the more they are likely to indicate positive attitudes towards staying at such hotels. This finding was consistent with previous studies in various settings (e.g., Ajzen, 1991; De Leeuw et al., 2015; Han et al., 2010; Kim & Han, 2010; Lam & Hsu, 2004). The results of these studies have generally supported the hypothesised relationship between

salient beliefs and attitudes. According to these studies, attitudes develop rationally from the beliefs individuals hold about the behaviour. Such beliefs are shaped by linking them to the outcome incurred by conducting the behaviour. As such outcomes are assessed positively or negatively, individuals consecutively obtain an attitude towards that certain behaviour. In this manner, people learn to regard behaviours they believe have largely favourable outcomes and develop unfavourable attitudes toward behaviours they link with mostly undesirable outcomes.

According to Fishbein and Ajzen (2010), researchers can obtain substantive information about the considerations that motivate individuals to perform a certain behaviour by conducting investigations at the beliefs level. Behavioural beliefs create a favourable or unfavourable attitude towards the behaviour as each belief has a significant impact (Ajzen, 1991). Thus, for studies using the TPB model, it is worth examining the underlying behavioural beliefs.

In the present study, environmental behavioural beliefs were found to have a significant impact on attitudes towards staying at green hotels: beliefs concerning the ability to secure a future for next generations, to contribute to fulfilling environmental obligations, and to protect the environment. These findings coincide with those yielded by the elicitation study as most of the benefits related to behavioural beliefs regarding staying at a green hotel were environmentally-centred. These beliefs have been reported in research as constructs that affect pro-environmental consumer behaviour in different settings (De Leeuw et al., 2015; Kim & Han, 2010). For instance, De Groot and Steg (2007) state that individuals tend to link the consequences of environmental problems with their own actions. Consequently, they believe that by acting in an environmentally responsible manner, they may contribute to protecting the planet and leaving a better environment for future generations (Lee et al., 2010). This advocates that travellers are likely to have different beliefs that affect their decision to stay at green hotels and that they might be more concerned about the environment. Therefore, generating strong environmental outcomes by communicating features that are apparent and appeal to travellers through several means would improve their attitudes. By doing so, travellers would hold more intense behavioural beliefs to be more responsible in protecting the environment.

5.3.1.2 Travellers' injunctive normative beliefs (subjective injunctive norm element)

Using Fishbein and Ajzen's (2010) TPB framework, it is presumed that subjective injunctive norms are determined by the set of accessible normative beliefs related to the expectations of significant others. These beliefs can be described as perceived behavioural expectations of an individual's salient referents, and motivation to comply with the expectations of these important others (Ajzen, 1991; Fishbein & Ajzen, 2010). The following section discusses the research question pertaining to the travellers' injunctive normative beliefs.

Research Question 3: Do travellers' injunctive normative beliefs have an impact on their subjective injunctive norms to stay at a green hotel?

H2: Travellers' injunctive normative beliefs will have a positive and significant impact on their subjective injunctive norms towards staying at a green hotel.

The second hypothesis was formulated to examine the relationships between injunctive normative beliefs of important referents and subjective injunctive norms about staying at a green hotel (H2). The results well supported the second hypothesis. This finding indicates that injunctive normative beliefs predict subjective injunctive norms related to staying at green hotels. The more positive travellers' injunctive normative beliefs, the more they are likely to indicate positive injunctive norms towards staying at a green hotel. This finding was consistent with previous studies in various settings (e.g., Ajzen, 1991; De Leeuw et al., 2015; Fishbein & Ajzen, 2010; Lam & Hsu, 2004) including travellers' behaviour in the green hotel context (Han et al., 2010; Kim & Han, 2010). These studies reported correlations between injunctive normative belief-based measures and estimates of subjective injunctive norms. For this reason, in forming subjective injunctive norms, the normative perceptions of significant others should be taken into account.

Social influence by significant others can facilitate the formation of beliefs about possible outcomes as it reduces the cognitive uncertainty through the informational influence of others (Fornara et al., 2016; Teng et al., 2015).

Following this line of argument, significant others might likely serve as an anchor for orienting travellers' decisions regarding staying at green hotels. By the same token, knowing what a significant referent prescribes may place more pressure on individuals to carry the behaviour especially if they are motivated to comply with the referent in question.

5.3.1.3 Travellers' descriptive normative beliefs (subjective descriptive norm element)

The updated TPB model added descriptive normative beliefs as the second type of consideration that concerns the perceived behaviours of important referents (Fishbein & Ajzen, 2010). In the updated TPB model, perceptions of strong descriptive beliefs produce subjective descriptive norms. In this study, descriptive normative beliefs included the likelihood that important others would stay at a green hotel when travelling.

Research Question 4: Do travellers' descriptive normative beliefs have an impact on their subjective descriptive norms to stay at a green hotel?

H3: Travellers' descriptive normative beliefs will have a positive and significant impact on their subjective descriptive norms towards staying at a green hotel.

The third hypothesis was formulated to examine the relationships between descriptive normative beliefs and subjective descriptive norms about staying at a green hotel (H3). The research included the normative influences of family, friends, colleagues and younger people.

The results well supported the third hypothesis. This finding indicates that descriptive normative beliefs predict subjective descriptive norms related to staying at green hotels. The more positive respondents' descriptive beliefs, the more they are likely to show a positive descriptive norm towards staying at a green hotel. The relationship between descriptive normative beliefs and subjective descriptive norms has been supported by previous studies in the pro-environmental context (De Leeuw et al., 2015; Gockeritz et al., 2009); however, no previous research has been found that empirically investigates the impact of

these beliefs on descriptive norms in the green hotel setting. Accordingly, the current study is the first to confirm this relationship in the green hotel context. Perceived actions of certain individuals serve as the cognitive foundation for subjective descriptive norms (Fishbein & Ajzen, 2010). Additionally, according to De Leeuw et al. (2015), beliefs about others' involvement in environmental behaviours could explain up to 60 per cent of the variance in injunctive descriptive norms. This implies that it is possible to evaluate descriptive norms directly through the perceived behaviour of important referents. In other words, in forming descriptive norms, the customary behaviour of significant individuals and groups should be taken into consideration. Further, the informational function of descriptive beliefs, since individuals would use them as easily accessible information on how most people would behave, would deem right or wrong behaviour in a given context (Fornara et al., 2016). Therefore, given that the descriptive social beliefs concern the standards of behaviour that a reference group considers applicable in a particular domain (i.e., staying at green hotels), if an individual internalises these values, they provide the foundation of their subjective descriptive norms.

5.3.1.4 Travellers' control beliefs (perceived behavioural control element)

In the TPB framework, control beliefs stem from readily accessible beliefs about necessary resources and opportunities that assist or impede conducting a specific behaviour (Ajzen, 1991; Jang et al., 2015). Control beliefs are combined with their corresponding perceived power, and this contributes in a direct proportion to the individual's subjective probability of perceived control (Ajzen, 1991).

Research Question 5: Do travellers' control beliefs have an impact on their perceptions of behavioural control to stay at a green hotel?

H4: Travellers' control beliefs will have a positive and significant impact on their perceived behavioural control towards staying at a green hotel.

The study identified four main control beliefs including: (1) location, (2) participating in environmental certification and eco-labelling, (3) visible communications, and (4) price. The fourth hypothesis was formulated to examine

the relationship between control beliefs and perceived behavioural control about staying at a green hotel (H4).

The results supported hypothesis 4. The relationship was statistically significant. According to Ajzen (1991), control beliefs represent one's perception of the difficulty or ability to perform the behaviour. Accordingly, this research demonstrated the significant relationship between control beliefs and perceived behavioural controls to stay at a green hotel. This result has been confirmed by previous studies employing the TPB model as these studies identified control beliefs as exerting a critical role in explaining perceived behavioural control in consumers' purchase decision-making processes (Ajzen, 1991; De Leeuw et al., 2015; Fishbein & Ajzen, 2010; Han et al., 2010). According to these researchers, control beliefs are mainly based on aspects that increase or reduce the perceived difficulty of performing a given behaviour. The more opportunities and resources individuals believe they have, the greater should be their perceived control over the behaviour. Analogous to the study's theorising regarding the determinants of perceived control, this finding indicates that travellers' perceived existence or lack of resources and opportunities contribute to their perception of their ability to perform the behaviour (i.e., staying at a green hotel). In order to advance a more pro-environmental consumption pattern in green hotels, several strategic efforts should be implemented. These efforts should include further strengthening environmental education about green hotels whether regarding their convenient locations and the accreditation of their green practices. Additionally, to make travellers more willing to search and stay at green hotels, more comprehensive advertising is warranted.

5.3.1.5 Travellers' attitudes

According to the TPB framework, attitudes reveal the extent to which an individual holds a favourable or unfavourable evaluation of a particular behaviour (Ajzen, 1991). When an individual holds a more positive attitude, then their intentions towards the behaviour will be more positive, and vice versa (Chen & Tung, 2014).

Research Question 6: Do travellers' attitudes have an impact on their intentions to stay at a green hotel?

H5: Travellers' attitudes will have a positive and significant impact on their intentions to stay at a green hotel.

The fifth hypothesis was formulated to examine the relationships between attitudes and intentions to stay at a green hotel (H5). A significant relationship between the participants' attitudes towards staying at green hotels and their intentions to stay at green hotels was found in this study; therefore, hypothesis 5 was supported. This finding, which aligned with previous studies (Chen & Tung, 2014; Han et al., 2010; Han & Kim, 2010; Kim & Han, 2010; Verma & Chandra, 2018), indicates that individuals' favourable or unfavourable evaluation of the behaviour is an important aspect in building their intentions towards that specific behaviour. Generally speaking, these studies showed that the more individuals believed that their behaviour would produce positive outcomes, and the less they believed it would produce negative outcomes, the more likely they were to engage in that given behaviour.

In parallel with the study's theorising regarding the impact of attitudes on behavioural intentions, attitudes can be regarded as a concept that triggers behaviour, energises and gives it direction (Fishbein & Ajzen, 2010). Some studies even reported that travellers' attitudes were found to be significantly and positively associated with their intentions and willingness to pay more to stay at a green hotel (Han et al., 2010; Han & Kim, 2010). This might be due to their perceptions of the positive impacts of the implemented practices aimed at recycling waste, saving water, and saving energy, among others. Consequently, it is expected that travellers would exhibit stronger attitudes towards staying at green hotels.

The present study reaffirms the critical role of attitude in intention formation. Han et al. (2010) focus on supporting green campaigns that possibly contribute to fostering travellers' favourable attitude toward staying at green hotels in the long-term. As noted earlier, travellers' attitude was a positive outcome of their behavioural beliefs. Therefore, producing solid positive outcome beliefs would contribute to improving travellers' attitudes (Han et al., 2010). By doing so, travellers would gain stronger beliefs and accordingly positive attitudes to be more environmentally responsible. This result can be used to assist in the

improvement of effective marketing strategies for green hotels. Therefore, to enhance travellers' intentions to stay at a green hotel, it could be useful to use different means to induce their positive attitudes.

5.3.1.6 Travellers' subjective injunctive norms

Behavioural intentions in the TPB framework can also be predicted by subjective injunctive norms (Fishbein & Ajzen, 2010). Subjective injunctive norms reflect the perceived social pressure to perform or not to perform the action (Fishbein & Ajzen, 2010; Hagger et al., 2007).

Research Question 7: Do travellers' subjective injunctive norms have an impact on their intentions to stay at a green hotel?

H6: Travellers' subjective injunctive norms will have a positive and significant impact on their intentions to stay at a green hotel.

The sixth hypothesis was formulated to examine the relationship between travellers' subjective injunctive norms and their intentions to stay at a green hotel (H6). There is some evidence from the outcomes of this study to support the view that subjective injunctive norms have a positive influence on intentions to stay. This finding suggests that travellers with higher subjective norms would have higher intentions to patronise a green hotel. This result supports the evidence reported by other studies regarding the significant role of subjective injunctive norms (Cialdini et al., 1990; Han & Hwang, 2016; Klockner, 2013; Verma & Chandra, 2018). According to these studies, these norms lead to a sense of obligation to accordingly take action, thus playing a significant role as norm activators. In particular, this result is consistent with the findings of Teng et al. (2015), because they report that subjective norms play a significant role along with the TPB constructs in influencing the intentions of travellers to patronise green hotels.

Although the results supported the relationship between subjective injunctive norms and travellers' intentions to stay at green hotels, the subjective injunctive norms construct had the weakest association with behavioural intentions. This finding suggests that, for the behaviour considered (i.e., staying at a green hotel),

personal considerations and control perceptions tended to overshadow the impact of perceived social pressure. As detailed in the literature review, Armitage and Conner (2001) report the subjective injunctive norm construct to be the weakest predictor of intention. Similarly, the findings in this study are supported by the meta-analysis by Hagger et al. (2007), that subjective norms have a lower prediction rate. The results indicated that approval of "significant others" is not that important, as family members, friends, and colleagues did not adequately provide a strong influence for participants to stay at a green hotel. Perhaps this is because individuals need to be internally motivated in order to significantly intensify the possibility of choosing to stay at a green hotel. Travellers do not want to feel pressured by significant others to participate in green behaviour (i.e., staying at a green hotel). This entails that such decisions are personal and are not mainly influenced by pressure from others.

Another possible reason why subjective injunctive norms were the weakest predictor of intentions to stay at green hotels may be associated with the individualist/collectivist aspect of culture. Individualist societies such as Australia emphasise individual accomplishment rather than group accountability, thus defining a person's own identity regarding individual attributes (Hofstede & Hofstede, 2005; Terry et al., 1999). As such, subjective injunctive norms may not be significant drivers for making decisions from an individualist perspective. Therefore, although individuals may feel that their significant others would expect them to stay at green hotels, these individuals are under no obligation to comply with these perceptions totally. Based on these findings, it is likely that while more positive attitudes and control perceptions induce travellers' intentions to stay at green hotels, social influence may not be a significant deciding factor in their decisions.

5.3.1.7 Travellers' subjective descriptive norms

This study explored the influences of subjective descriptive norms on the willingness to stay at a green hotel. According to the literature review, the TPB model was updated by Fishbein and Ajzen in 2010, whereas subjective norms have been modified into injunctive and descriptive norms. Subjective descriptive

norms refer to perceptions of significant others' behaviours and are expected to influence behavioural intentions (Rivis & Sheeran, 2003).

Research Question 8: Do travellers' subjective descriptive norms have an impact on their intentions to stay at a green hotel?

H7: Travellers' subjective descriptive norms will have a positive and significant impact on their intentions to stay at a green hotel.

The seventh hypothesis was formulated to examine the relationship between travellers' subjective descriptive norms and their intentions to stay at a green hotel (H7). Although subjective descriptive norms were hypothesised to influence intentions in the TPB model, this study did not report that result as subjective descriptive norms did not have an impact on travellers' intentions. Therefore, hypothesis 7 was rejected. The results indicate that intentions to stay at a green hotel are positively associated with the pressure of what significant others expect travellers to do (subjective injunctive norms) and not by what significant others do (subjective descriptive norms). In other words, what others say is more important than what others do to protect the environment.

Fishbein and Ajzen (2010) state that injunctive and descriptive norms may either be corresponding with each other or contradictory. They further elaborate that unlike injunctive norms, where significant others are viewed as appropriate social agents for a given behaviour, the actions of these social agents may be irrelevant to that behaviour. This finding is not uncommon or surprising, because Rivis and Sheeran (2003) state that the influence of descriptive norms in TPB was still unclear as it had only been studied in regard to single behaviours, and with comparatively small sample sizes. Moreover, only a relatively few studies to date have examined the impact of subjective descriptive norms in the TPB model and its effect size is still viewed as controversial. Although individuals may be guided by what others do, this line of thinking may ignore the fundamental role of motivation and knowledge, which makes a strong case in influencing the performance of a given behaviour. According to Fishbein and Ajzen (2010), a person's own behaviour is expected to be affected by the perceived behaviour of others depending on the nature of the behaviour under investigation. In the case

of green hotels, individuals tend not to rely on such sources of knowledge (i.e., perceived behaviour of particular individuals or groups) in forming their intentions to stay in such hotels. Perhaps these travellers tend to take pride in staying in a green hotel reflecting their pro-environmental obligations, which diminishes the impact of perceived prevalence of others' behaviours on their intentions.

From the evidence presented so far, the statistically insignificant relationship between subjective descriptive norms and intentions of staying at a green hotel can be also attributed to the Australian individualistic culture. The key point addressed by this aspect is the amount of interdependence a society upholds among its members, as it associates with whether individuals' behaviour is defined in terms of "I" or "We" (Hofstede & Hofstede, 2005). This result adds more weight to the previous discussion concerning the prevailing notion of individualism that may place less emphasis on group actions and their conforming to norms (Wang & Ritchie, 2012). Australia is a highly Individualist culture, which translates into a loosely-knit society (Hofstede & Hofstede, 2005). Subsequently, individuals will not be influenced by what others do in order to follow up with their own behaviour. As such, concerning staying at a green hotel, the actions of significant referents may not be pertinent as travellers may be motivated to make decisions from an individualistic perspective.

5.3.1.8 Travellers' perceived behavioural control

In the TPB framework, perceived behavioural control evaluates how well an individual can control elements that may facilitate/restrain their acts in a specific situation (Fishbein & Ajzen, 2010; Han et al., 2010). Consequently, behavioural intentions are positively influenced by their confidence in their capability to conduct a particular behaviour (Chen & Tung, 2014; De Leeuw et al., 2015; Fishbein & Ajzen, 2010).

Research Question 9: Do travellers' perceptions of behavioural control have an impact on their intentions to stay at a green hotel?

H8: Travellers' perceived behavioural control will have a positive and significant impact on their intentions to stay at a green hotel.

The eighth hypothesis was formulated to examine the relationship between travellers' perceived behavioural control and their intentions to stay at a green hotel. The study's results empirically verified the significant role of perceived behavioural control in influencing travellers' intentions; therefore, hypothesis 8 was supported. Analogous to hypothesis 8, the significance of behavioural control is apparent as the resources and opportunities accessible to the individual must to some degree dictate the probability of behavioural performance. A number of studies verified that an individual's behavioural intentions are positively affected by their self-confidence in their capability to conduct a certain behaviour (e.g., Ajzen, 1991; Chang et al., 2014; Chen & Tung, 2014; De Leeuw et al., 2015). These studies have shown that individuals' behaviour is strongly associated with their confidence in their ability to perform it (i.e., perceptions of behavioural control). It stands to reason that facilitating as well as impeding aspects of performing the behaviour can raise or lower a person's perceived behavioural control and explain substantial variance in behavioural intentions. This finding is also parallel with environmental psychology studies which have emphasised the importance of individuals' perceptions of control when forming a decision to engage in a pro-environmental purchasing behaviour (Chen & Tung, 2014; De Leeuw et al., 2015). Consistent with such insistence, the results demonstrated that boosting travellers' level of perceived control is one of the effective means to induce travellers green purchasing decisions.

In addition, the findings showed that perceived behavioural control was the most significant predictor of travellers' intentions to stay at a green hotel. On the basis of the results obtained, travellers who felt confident they could stay at a green hotel, and would have the opportunity to stay were more likely to report intention to stay at green hotels than those travellers who lacked confidence and opportunities (Chang et al., 2014; Chen & Tung, 2014). If green hotels are viewed to be simply accessible to travellers, then they are more inclined to choose them. This result is inconsistent with the findings of Han et al. (2010), as they report that attitudes and subjective norms have stronger impacts on travellers' intentions to stay at a green hotel than those of perceived behavioural control. This finding proposes that the study participants chose a green hotel because of their ability, and not because of their attitudes towards environmental protection or the perceived social pressure. Travellers probably select green hotels for other

motives, such as value, accessibility or availability of such hotels. Therefore, hotel managers should enhance travellers' convenience by stressing logistical efficiency with regard to green hotels to reduce any perceived difficulty. By doing so, they might convince more potential travellers to convert into the green mainstream (Paul et al., 2016).

5.3.1.9 Travellers' green hotel knowledge

Knowledge plays a major and conclusive part in the decision-making process (Fodness & Murray,1999; Shin et al., 2018). Consequently, in the TPB framework, there is a need to consider knowledge as it would be expected to impact intentions, in parallel with attitudes, social norms, and perceptions of behavioural control (Aertsens et al., 2011).

Research Question 10: Does travellers' green knowledge have an impact on their intentions to stay at a green hotel?

H9: Travellers' green hotel knowledge will have a positive and significant impact on their intentions to stay at a green hotel.

The ninth hypothesis was formulated to examine the relationship between travellers' green knowledge and their intentions to stay at green hotels (H9). The results revealed a strong positive influence of green hotel knowledge (GHK) on intentions to stay at green hotels; therefore, hypothesis 9 was supported. This result verified the critical role of this construct in explaining green travellers' behaviour, implying that increasing travellers' environmental knowledge contributes to building strong intentions to stay at a green hotel. Previously, Ajzen et al. (2011) stated that knowledge is not viewed as an important element that affects the decision-making process. Instead, they highlighted the need to identify the specific beliefs consumers hold about certain issues and how these beliefs motivate their intention and behaviour. The result of the current study is inconsistent with Ajzen et al. (2011), as green hotel knowledge was identified as an additional construct through the elicitation study, where most participants indicated that their lack of knowledge about the implementation of environmental practices in green hotels impedes their decisions. In addition, the results from the quantitative study identified green hotel knowledge as the second significant

predictor of travellers' intentions to stay at green hotels, after perceived behavioural control.

This result was in line with the prior research that confirmed the prominence of this variable in consumers' decision-making processes (e.g., Chen & Peng, 2012; Fielding & Head, 2012). According to these scholars, consumers are becoming more alert of environmental problems, and this is reflected in their purchasing decisions. Further, this result confirmed D'Souza et al.'s (2006) declaration that consumers' environmental knowledge is critical since the green revolution is mainly driven by consumers. By the same token, once travellers develop knowledge regarding hotel green practices, it is highly likely that such knowledge will have a crucial effect on their likelihood of behaving in a pro-environmental manner (i.e., staying at a green hotel).

In the green hotel context, lack of knowledge is viewed as of one of the most imperative factors for travellers declining to stay at such hotels (Chen & Peng, 2012; Nimri et al., 2017). For that reason, enhancing knowledge assists people in their decision-making processes. Specifically, providing individuals with knowledge about the origins and consequences of environmental issues, in addition to possible actions and remedies related to the issue at hand, is more likely to induce pro-environmental behaviour. Consequently, in the study's context, presenting information about how green hotels contribute to the protection of the environment improves travellers' intentions to stay at such hotels. Also, positive changes resulting from travellers' green actions should be highlighted and should stress the ability of each traveller to decrease environmental deterioration (Warren et al., 2017).

5.3.2 Support for the Extended TPB Model

Several meta-analyses provided strong support for the predictive validity of the TPB model in terms of the proportional variance explained by the TPB main constructs of (e.g., Armitage & Conner, 2001; McEachan et al., 2011). Nevertheless, the model was criticised as it still leaves a substantial amount of unexplained variance in intention and behaviour (Armitage & Conner, 2001). Indeed, Ajzen (1991) states that the model is open to further augmentation if further essential constructs are identified: "The theory of planned behaviour is, in

principle, open to the inclusion of additional predictors if it can be shown that they capture a significant proportion of the variance in intention or behaviour after the theory's current variables have been taken into account" (p. 199).

The current research sought to provide a deeper understanding of Australian travellers' intentions to stay at a green hotel by including the green hotel knowledge construct into the main framework of the theory. The present study successfully developed the critical role of green hotel knowledge from the elicitation study and proposed a casual model of TPB that can better explain the behavioural intentions of travellers to stay at a green hotel.

The extension of the theory in the current study followed the suggestions of Ajzen (1991) as the additional construct of green hotel knowledge was conceptually independent of existing constructs of the theory, and was regarded as a causal factor that influenced travellers' decisions related to staying at a green hotel. The extended TPB model had relatively better fit statistics than the original TPB model and the updated TPB model including injunctive and descriptive norms. In addition, the results of the modelling comparisons implied that the extended TPB model (Adjusted R^2: 0.42) represent a substantial improvement for comprehending intention formation in the green hotel context over the original TPB model (Adjusted R^2: 0.26) and the updated TPB model (Adjusted R^2: 0.33), including descriptive and injunctive subjective norms. It can be seen that although the results from the first two models were high, the addition of green hotel knowledge further increased the explained variance making a significant contribution in the prediction of travellers' intentions to stay at green hotels.

On the basis of published research, there is ample evidence to suggest that consumers' knowledge influences their green behavioural intentions (e.g., Chen & Peng, 2012; Hu et al., 2010; Tan, 2011). In their meta-analysis, Hines et al. (1987) report an average correlation of 0.30 between environmental knowledge and behaviour. Further, in this research, while attitude toward staying at green hotels, social norms, and perceptions of behavioural control each reveal a different aspect of the behaviour, adding green hotel knowledge within TPB resulted in a more theoretically coherent model. This implies that green hotel knowledge would be a valuable addition to the theory, at least for those

behaviours where lack of knowledge is likely to add to the prediction of intention. Accordingly, beyond the simple application of TPB to hospitality purchasing activities, researchers may consider pro-environmental knowledge as a critical factor as they develop the theory to explain travellers' decision-making process in both green hotel and other environmental hospitality contexts.

5.4 The Intervention Effect

TPB can offer a platform for testing intervention strategies that will contribute to affecting intention and action (Ajzen, 2017). Additionally, since behaviour change interventions are often complex, it is crucial to identify the active ingredients of change by examining each independently including salient beliefs (Montanaro, 2014). Therefore, this study is the first to introduce an intervention to TPB in the green hotel context and is one of the few studies to provide a rigorous evaluation of an intervention directed at the TPB's indirect and direct constructs. The study investigated the impact of different interventions on the TPB model. To provide participants with realistic messages, pictorial elements featuring either the positive effects of hotels on the environment or negative effects of environmental pollution were used to explore participants' responses to these images.

Research Question 11: Does employing the intervention of positive and negative message framing affect the relationships between the suggested antecedent variables and travellers' intentions to stay at a green hotel?

5.4.1 Multi-group analysis

The results of the multi-group analysis suggested a varying strength of the association between the elements in the TPB model among the participants from the three groups. The followings sections present the results of the path differences across the three groups.

5.4.1.1 The path between behavioural beliefs and attitude

The path from behavioural beliefs to attitude path is significantly stronger in the PFI group than in the NFI group. The results indicated that a weaker relationship between behavioural beliefs and attitudes existed among the NFI group. The

results replicated previous research findings (Jones et al., 2003; Parrot et al., 2008) concerning positive framing and the TPB model. Further, the results provide some evidence that a brief intervention targeting beliefs may impact attitude. According to this finding, providing information regarding the benefits of engaging in a particular behaviour, rather than the traditional negative appeals, can induce travellers' beliefs and attitude regarding this behaviour (i.e., staying a green hotel). Factors influencing pro-environmental behaviour can be related to individual beliefs including a moral responsibility to protect the environment for future generations (Babakhani et al., 2017, Nimri et al., 2017). Some travellers believe, for instance, that staying at a green hotel is the right thing to do; which is an easy way to be more environmental. The positively-framed messages used in this study showed travellers how their behavioural changes could lead to a decrease in environmental impacts. Such efforts would eventually result in the enhancement of their attitudes towards staying at green hotels.

As for the difference in the paths from behavioural beliefs to attitude between the CG and NFI group, the results also indicated that a weaker relationship between behavioural beliefs and attitudes existed among the NFI group. Receiving negatively-framed images had, in fact, a stronger negative impact than receiving no images at all on attitudes to stay at green hotels. This confirms that the negative messages contributed to decreasing travellers' behavioural beliefs about the importance of their pro-environmental behaviour in the context of green hotels. Other studies have confirmed this finding verifying that the use of negative framing could adversely affect beliefs and attitudes (Babakhani et al., 2017; Jones et al., 2003). Obviously, more research is warranted to identify the cause of this intriguing finding as it may be possible that negative framing is more fruitful if messages are designed differently.

5.4.1.2 The path between attitude and intention

In regards to the path between attitude and intention to stay at a green hotel, this path is significantly stronger in the PFI group than in the NFI group. Once participants were presented with positive information about the impact of green hotels, the effect of their attitudes on their intentions was higher. These results indicate that presenting positive information about engaging in a specific

behaviour, rather than negative material, would induce travellers' attitudes to engage in that behaviour. As discussed in the environmental psychology literature, positive communication encourages individuals to be conscious in regards to the impact of their behaviour on the environment, thus increasing their sense of environmental responsibility (Cornelissen et al., 2008). According to Babakhani et al. (2017), the use of positive messages helps in changing attitudes and adoption of pro-environmental behaviour in comparison to negative messages. Therefore, positive communication messages can be viewed as the primary avenue used to induce positive attitudes towards desirable behaviour (i.e., staying at green hotels).

Regarding the difference between the CG and NFI group, the path between attitude and intention to stay at green hotels was significantly stronger in the CG than in the NFI. Accordingly, travellers' perceptions of the negative message framing would adversely influence their intentions to stay at green hotels. This finding suggests that negative persuasive messages may not be valid for travellers as these messages create negative perceptions of behavioural outcomes. This finding may point toward using no images rather than negative environmental messages. However, further research should be conducted to either disprove or validate the controversial results in this study.

5.4.1.3 The path between perceived behavioural control and intention

As for the path between perceived behavioural control and intention to stay at a green hotel, this path is significantly stronger in the PFI group than in the NFI group. It is possible that the positively-framed images may have enclosed particular components of control enhancement. In an attempt to highlight the positive impacts of green hotels on the environment, this may have unconsciously targeted perceived behavioural control. These messages may have given participants new notions about staying at green hotels, thereby decreasing their perceived obstacles. This finding aligns with previous studies that indicate that positive framing has a substantial impact on control perceptions in showcasing conditions that facilitate engagement in the behaviour (Chatzisarantis & Hagger, 2005; Parrott et al., 2008). According to Babakhani et al. (2017), communication is required to emphasise the perceived effectiveness of green programmes and

their transparency. By attempting to highlight the benefits of staying at a green hotel, such positive messages might give travellers new insights into controlling elements that may facilitate their decisions.

5.4.1.4 The path between green hotel knowledge and intention

Finally, the results indicated that the path from green hotel knowledge to intention to stay at a green hotel is significantly stronger in the PFI group than in the NFI group. This finding aligns with previous research proposing that messages entailing positive outcomes will increase individuals' knowledge, which will eventually influence the cognitive foundation of intentions (Bamberg et al., 2003; Kao et al., 2017; Steg & Vlek, 2009). Marketing material provided by hotels should go beyond the standard by focusing on the impact of green practices (Kim et al., 2016; Ponnapureddy et al., 2017). In the current study, using positive messages has been shown to improve travellers' understanding of the influence of their behaviour on the environment, thus raising their knowledge and consequently their intentions to stay at such hotels. These positive frames assisted in regulating some level of awareness that caused a change in behavioural intentions (Bamberg et al., 2003).

Conversely, the comparison of the path from green hotel knowledge to intentions between the CG and the NFI group showed a weaker relationship between knowledge and intentions among the NFI group. Negative images elicited less message engagement in the NFI group. Receiving negatively-framed images had, in fact, an adverse impact than receiving no images at all for inducing knowledge and, accordingly, intentions to stay at green hotels. This contradicts the proposition of Newhagen and Reeves (1992) and Perrin (2011) that negative information and emphasising the undesirable outcomes are more potent than their positive counterparts. The results of this study evidenced that information becomes critical in travellers' choice if perceived as positive.

5.4.2 Group comparison using ANOVA

The multivariate ANOVA results of the interventions indicated that the PFI group consistently had the highest mean scores followed by the CG, whereas the NFI group had the lowest means. The results revealed a statistically significant

difference in all variables except normative beliefs in addition to social norms between the three groups. These findings provide initial evidence that informing travellers about the green hotel's positive impacts is likely to increase their decisions. However, informing them about environmental pollution might have an adverse impact, which will eventually decrease their decisions. Further, receiving no messages at all is considered more beneficial than receiving negatively-framed messages for triggering intentions to stay at green hotels.

Some researchers have indicated that negative messages would cause more substantial changes in behavioural intentions and related cognition (Newhagen & Reeves, 1992; Perrin, 2011). According to these researchers, individuals experience greater arousal when they are exposed to negative messages than they do when they are exposed to comparable positive messages and alter their behaviour accordingly. However, the results of this study were inconsistent with their findings, as the group who were presented with negative messages showed a lower intention to stay at green hotels. The results from the present study broadly support the notion that information stressing the benefits of engaging in a particular behaviour would motivate consumers to conduct that behaviour (Babakhani et al., 2017; Jones et al., 2003). Houts et al. (2006) additionally claim that positive framing would increase the target behaviour, while negative framing would decrease the behaviour. This line of reasoning considers the leeway that positively-framed messages seem more infused with positive implications than negatively-framed messages and, therefore, travellers may be inclined to engage with positively-framed appeals more diligently. Even though adverse persuasive communication may be considered to be more dynamic in the decision-making process, reflecting about negative outcomes is not necessarily a more attractive aspect. These are promising results, signifying that an intervention based on positive persuasive messages could promote behaviour in the green hotel context. Consequently, travellers' impressions of the content of the message can have a significant impact on their intentions to stay at green hotels.

As for the insignificant impact of communication messages on normative beliefs and social norms, this has been reported in previous studies (Chatzisarantis & Hagger, 2005; Parrott et al., 2008). As the aim of these messages was to highlight the positive impacts of hotels on the environment and the negative impact of

pollution, it is anticipated that they might not affect social norms. According to Parrott et al. (2008), this type of intervention is not explicitly designed to influence an individual's perceptions of whether important referents would support or engage in this behaviour. Therefore, these interventions did not succeed in changing social beliefs, or their subsequent social norms as their approach focused on gains and losses.

Finally, it is worth highlighting that the effect size of the intervention on green hotel knowledge was 0.15, which is high. This implies that applying an intervention accompanied by positive information seems to have more impact on knowledge and intentions to change behaviour. This result has been confirmed by previous studies suggesting that adding positive information has a significant impact on knowledge (Bamberg et al., 2003; Kao et al., 2017). According to Ponnapureddy et al. (2017), green information about hotels can be beneficial to encourage travellers to have confidence in the promotion of a hotel, prompting a reasonably high booking intention. The findings suggest that messages using positive outcomes may provide insights into the refinement of marketing strategies. Such messages may heighten travellers' awareness of the environmental impacts of their behaviour, thus increasing their knowledge of behavioural alternatives (e.g., green versus traditional hotels) that, in turn, will influence their purchasing decisions.

5.5 The Demographics Effect

Research into consumer behaviour often tries to explain travellers' pro-environmental behaviour by linking such behaviour to demographics (Han et al., 2011; Ponnapureddy et al., 2017). This research tested the impacts of demographic characteristics (i.e., gender, age, income and education) on intention formation in the green hotel context. Previous studies show contradicting results of personal characteristics of travellers across gender, age, education, and income and their impact on their pro-environmental intentions (Berezan et al., 2014; Han et al., 2009, 2011; Ponnapureddy et al., 2017). Findings in the current study demonstrated that, with the exclusion of gender, travellers' intentions to stay at a green hotel were not significantly diverse across age, level of gross income and education. The analysis revealed that female

participants had a higher intention to stay at a green hotel than males. Few previous studies undertaken in the green hotel context contain similar findings (Berezan et al., 2014; Han et al., 2011). This finding helps hotel marketers understand the characteristics of their target segment. Female consumers tend to handle information in a more comprehensive and explanatory mode, relying on multiple sources of information (Kim et al., 2007). Consequently, to attract more female travellers, green hotel marketers should provide more useful and substantial information and this warrants further investigation.

Yet, for the other characteristics, the results indicated no difference in intentions among age, income, and education. Several other environmental studies report non-significant roles of these demographics in the green hotel context (e.g., Berezan et al., 2014; Han et al., 2011; Ponnapureddy et al., 2017). Overall, the findings indicate that aspects of demographic characteristics such as age, education, and income are not significant in explaining travellers' intentions to stay at green hotels. This may be encouraging news for hotel marketers as it gives more flexibility by permitting them to extend their market beyond different target groups.

5.6 Implications

In the current research, TPB was employed in the Australian context to examine travellers' intentions to choose a green hotel over a traditional hotel. Throughout the stages of the research process, the main beliefs underpinning the TPB constructs were identified, and the model was extended by incorporating green hotel knowledge as a critical construct. In addition, the impact of positively and negatively-framed messages on the model's constructs was examined. The study's contribution is presented by implications for both theory and practice.

5.6.1 Theoretical implications

A recent call was made to employ relevant theoretical frameworks to help advance environmentally related knowledge about travellers' behaviour in the hotel sector (Myung et al., 2012, Rahman et al., 2015). A theory-driven approach towards the behavioural components of environmental issues is expected to

provide a strong foundation for recognising and managing these issues. Therefore, the current research employed the theory of planned behaviour as the framework of the examination, as the ability of this model to predict intentions and behaviour has been verified within several settings. The research makes six main contributions to hospitality environmental research, consequently adding to a growing body of literature on the utilisation of this theory to study traveller behaviour in the green hotel sector.

First, findings from the current research provide further support for the ability of the TPB to predict Australian travellers' intentions to stay at green hotels. Myung et al. (2012) argue that limited attention has been devoted to the recognition of determinants influencing green decisions. Only a small number of theoretically-based studies examine elements underpinning travellers' intentions to stay at a green hotel (e.g., Chen & Tung, 2014; Han, 2015; Han & Yoon, 2015b; Rahman & Reynolds, 2016; Teng et al., 2015; Yadav et al., 2018). Further, these studies were conducted in different countries (e.g., United States, India, China, and Taiwan). The results of these studies varied according to the countries that they were conducted in as the impact of each construct of TPB was different. For instance, Americans and Indians' attitude toward a behaviour had a greater level of influence on intention to stay in green hotels than subjective norm and perceived behavioural control (Han, 2015; Han el al., 2010; Verma & Chandra, 2018). For the Taiwanese, subjective norms and perceptions of behavioural control had the highest impact on intentions to stay at green hotels. For the Chinese, subjective norms had the highest impact on staying intentions (Chen & Peng, 2012). The current study indicated that perceived behaviour control followed by green hotel knowledge and attitude had a greater level of influence on Australians' intentions to stay in green hotels. Moreover, some studies report that travellers might be concerned about environmental issues (Teng and Chang, 2014; Yadav et al., 2018), others suggest that travellers are sceptical about hotels' environmental practices (Rahman & Reynolds, 2016). Subsequently, this research provides a valuable contribution to the current understanding of Australian travellers' behavioural intentions towards green hotel accommodation.

Second, while some studies used TPB to predict travellers' behavioural intentions, they have not always started with the elicitation of salient beliefs

impelling their green behaviour. Ajzen (1991) suggests that these studies are essential for understanding any particular behaviour better. This research is one of the limited studies to utilise the full framework of the TPB model, including not only direct constructs of attitude, social norm, and perceived behavioural control as determinant factors of behavioural intentions but also the elicited beliefs, which are expected to trigger these factors. Specifically, there has been a lack of studies involving the elicitation of Australian travellers' beliefs in relation to staying at green hotels. Therefore, this study acknowledges a major gap in the existing literature. The study was able to use the theoretical foundation of the TPB to develop an instrument to obtain a new set of items for belief constructs provided through a qualitative elicitation study. Within the context of TPB, six behavioural beliefs were identified: (1) protecting the environment; (2) fulfilling environmental obligations; (3) assisting in securing a future for next generations; (4) staying at a healthy environment; (5) greenwashing; and (6) compromising on comfort. Regarding normative beliefs, three sources were identified as referents who would support staying and would stay at a green hotel: (1) family and relatives; (2) younger generation; and (3) colleagues. For the control beliefs, four dimensions were identified: (1) location; (2) participating in environmental certification and eco-labelling; (3) visible communication; and (4) price. This elicitation study provided an in-depth exploration of Australian travellers' beliefs that would affect their intentions to stay at a green hotel.

Third, this research is one of the limited TPB studies to distinctly assess subjective injunctive and descriptive norms in addition to injunctive and descriptive normative beliefs in the green hotel context. Interestingly, the results indicated that injunctive norms had a significant influence on intentions to stay in a green hotel while descriptive norms did not. In other words, travellers' intention to stay in a green hotel is positively associated with the pressure of what significant others expect them to do and not by what these people actually do. This finding is not uncommon, as only a few studies to date have studied the impact of subjective descriptive norms in the TPB model and its effect size is still viewed as controversial. According to Fishbein and Ajzen (2010), a person's own behaviour is presumed to be affected by the perceived behaviour of others depending on the nature of the behaviour under investigation. In the case of green hotels, individuals tend not to rely on such sources of knowledge (i.e.,

perceived behaviour of particular individuals or groups) in forming their intentions to stay in such hotels. Perhaps these travellers tend to take pride in staying in a green hotel reflecting their pro-environmental obligations, which diminishes the impact of perceived prevalence of others' behaviours on their intentions. This implication should be treated with caution because individuals' own behaviour is presumed to be affected by the perceived behaviour of others depending on the nature of the behaviour under investigation. Therefore, theoretically, this may show that this theory does not function in the same manner in all conditions, and varies depending on the setting and act studied.

Fourth, through the extended TPB framework guiding this research, green hotel knowledge emerged as a strong predictor of intention, a result that is consistent with prior research regarding the role of knowledge in the TPB model (e.g., Chen & Peng, 2012; Hu et al., 2010). In recent years, interest has grown in the role of knowledge in relation to consumer behaviour (Babakhani et al., 2017). Despite this interest, only one empirical study by Chen and Peng (2012) assessed green hotel knowledge in relation to travellers' behaviour with most researchers simply suggesting that it would be a useful element to examine further. The current research is the first study to integrate this factor from the findings of the focus groups, thus presenting a psychosocial factor emerging from the population under study. The results indicated that it might be significant for this knowledge to be added to the theoretical framework, predominantly in relation to green behaviour.

Fifth, an interesting theoretical finding is the significant role of perceived behavioural control in the perspective of this study. On the basis of the results obtained, this construct indexed the extent of control travellers thought they had over staying at green hotels. By the same token, travellers who felt confident that they could stay in a green hotel, and would have the opportunity to stay were more likely to report intention to stay at green hotels than those travellers who lacked confidence and opportunities to stay in such hotels (Chen & Tung, 2014; Han et al., 2010). A possible reason for this phenomenon might be the several barriers perceived by travellers, including cost, location, and lack of knowledge about green hotels (Nimri et al., 2017). If any of these constraints existed, travellers' intention to stay in a green hotel would decrease, even if they had a

positive attitude towards green hotels. This finding highlights the importance of creating circumstances that assist in purchasing green hotel accommodation and of overcoming any perceived barriers. This study also identified attitudes as a main determinant influencing travellers' intention to stay in green hotels. The more individuals believed that their behaviour would produce positive outcomes, the more likely they were to engage in that given behaviour (Ajzen, 1991). The significant 'attitude-intention' relation in this study is consistent with prior research (Chen & Tung, 2014; Han et al., 2010; Han & Kim, 2010), which indicates that travellers' favourable or unfavourable evaluation of staying at a green hotels is an imperative aspect in building their intentions towards staying at green accommodation.

Finally, while a number of studies focus on consumer behaviour in the green hotel context, none have focused on introducing an intervention to the TPB model. Critically, TPB has rarely been used to assess the success of interventions. Furthermore, Ajzen (2017) proposes that interventions should address all the constructs of the theory including salient beliefs. The current research provides valuable input and additional insight to the understanding of travellers' behaviour by employing an intervention in the green hotel context. Additionally, this study was one of the few studies to provide a rigorous evaluation of the mechanisms of introducing interventions directed at the TPB model including salient beliefs. This study suggested that the principle mechanisms triggering the associations between the constructs and intention to stay at green hotels can vary according to the framing of communications messages. Surprisingly, the findings indicated that receiving negatively-framed images had, in fact, a stronger negative impact on some paths between determinants of behavioural intentions and intentions to stay at green hotels. Therefore, in the context of green hotels, providing travellers with negative information about environmental pollution might not be the ultimate means to induce behavioural intentions to stay at a green hotel.

5.6.2 Practical implications

There are six major implications that this study provides for practitioners. First, as environmental sustainability continues to be a prominent issue in the hotel sector, an all-inclusive understanding of travellers' intentions toward green products and

services is warranted. Hoteliers are under pressure to become environmentally-friendly, and one of the main reasons is related to the increasing consumer demand. The current study implied that hotel managers, who are keen to adopt and implement a pro-environmental strategy, are now able to understand that the intentions of travellers to choose a green hotel over a traditional one is a planned behaviour, and this follows a decision-making process. Hence hotels should publicise their green attributes to the general public to facilitate hotels becoming sustainable through green operations aiming to gain a competitive advantage over similar non-green lodging properties. Further, managers need to build their communication strategy aimed to increase individuals' most salient beliefs to persuade and encourage their travellers to stay at green hotels. The possible communication strategies should reinforce the environmental and personal outcomes associated with staying at green hotels, highlighting the perception that a range of significant others would support this decision, and emphasising that behaviour could be conducted efficiently. By doing so, travellers may build stronger beliefs that they will fulfil their environmental obligations if they choose green accommodation.

Second, the results would assist hotels which are engaged in green programs in building effective marketing strategies based on the salient beliefs of consumers, particularly in the Australian context. For example, the results specify that environmental benefits are more significant than personal benefits, therefore, marketers should implement green campaigns highlighting the importance of environmental protection to influence green purchasing behaviours. By doing so, consumers may build stronger beliefs that they will fulfil their environmental obligations if they choose green accommodation. Moreover, hotel managers should actively seek to follow green standards demonstrating such commitment through green labels or green certifications and obtaining programs and techniques related to best practices in environmental management (Han e al., 2011; Manaktola & Jauhari, 2007). Additionally, the findings of the elicitation study reveal that it is important for hotels to make their green practices visible to consumers. Hotel managers need to actively inform consumers of their green practices via various knowledge sources. They should develop promotional campaigns that effectively communicate the hotel's comprehensive green programs to ensure that consumers are well-informed. They also need

certification by independent third parties, and communicate this to their guests. These efforts may help consumers to become better acquainted with the green practices implemented in green hotels which will assist them to make better-informed purchasing decisions.

Third, the results of this research also designate that further education regarding the green programmes implemented by hotels would be valuable. Furthermore, though travellers hold positive perceptions of green hotels, they might also be concerned about compromising their comfort and having to incur extra expenses when staying in such hotels. Subsequently, it is vital for hotel managers to deliver marketing messages that clarify the aims of their green programmes to enable travellers to comprehend the notions behind implementing such programmes and to shape the reputation and business profile of green hotels. Employees should also become an integral part of the communication process to ensure that the environmental programs are a success. Without staff involvement, the hotel's green initiatives will very likely fail, as many environmental measures are executed by front-line employees (Chan & Hsu, 2016). Further, they need to educate potential travellers that the implementation of green practices does not necessarily compromise the quality of service and that the prices charged by green hotels are reasonable. That said, hotel managers need to be careful as exaggeration might give the impression of greenwashing, particularly among travellers with little environmental knowledge. The challenge for hotel managers is to employ the correct balance through honesty and transparency in marketing campaigns and green practices. Hopefully, with several means of information dissemination, travellers' environmental concerns will be elevated eventually leading them to stay at green hotels.

Fourth, based on the findings of the current research, the markedly more robust influence of perceived behavioural control on behavioural intentions to stay at green hotels makes a strong case for establishing interventions, such as advertising or public education, that generate a sense of control for the pro-environmental consumer. As travellers are not yet adequately keen to sacrifice for the environment, green hotels should simply become accessible to travellers by maximising exposure and disseminating information. For instance, campaigns focusing on the accessibility of such hotels in regards to location could prove

effective. Also, by ensuring the visibility and credentials of their green practices, these hotels can improve travellers' patronage intentions.

Fifth, this study adds to the evidence that marketing appeals stressing benefits of a specific behaviour are perceived as more effective. Positive environmental framing significantly influences travellers' willingness to stay at green hotels as the findings of this research show. This suggests that there are opportunities to tap the positively rather than negatively-framed messages to influence travellers' decisions in regards to green hotels. As such, it is crucial that hotel marketers create a positive environmental impression through their green initiatives, so that such appeals can be productive.

Finally, research into the consumer aspect in the green hotel context has often attempted to explain travellers' intentions and associate them to demographic characteristics (Han et al., 2011; Ponnapureddy et al., 2017). Apart from gender, the relationships between participants' socio-demographic characteristics and intentions to stay at green hotels were insignificant. Consequently, females could be targeted with effective and reliable pro-environmental knowledge as they represent an important source market and this merits further investigation.

5.7 Limitations

The current research extends our knowledge in relation to travellers' preferences for a green hotel over a traditional one, particularly with relevance to Australia. However, six limitations came into sight upon discussing the results.

The principal limitation of this study is its examination of travellers' intentions to stay at green hotels instead of their actual staying behaviour. This approach has a limitation with regard to whether travellers' intentions lead to actual behaviours or not. For this reason, it should be acknowledged that using a longitudinal approach would be beneficial for examining the actual behaviour of green travellers who have indicated a willingness to stay. Prior research reports that the behavioural intention models are vigorous in various behavioural fields (Ajzen, 1991; Fishbein & Ajzen, 2010; Han et al., 2010), nevertheless researchers should be aware that consumers' actual behaviour does not always correspond to their

reported intentions (De Leeuw et al., 2015). Generally, individuals overstate their intentions to engage in socially accepted behaviour (Mostafa, 2007), for instance intentions to stay at green hotels. Further, even the paramount intentions do not continuously interpret into actions (Kasim, 2004). Nevertheless, this limitation does not detract from the significance and contribution of the current study but merely acts as a direction for future research.

The second limitation concerns using surveys as a means of data collection. Social desirability bias might be an issue as it may obstruct respondents from being honest with their responses. Further, respondents might deliver answers according to how they believe they should behave, and not how they behave in practice. In addition, surveys cannot capture the rich qualitative data of a specific phenomenon.

The third limitation concerns the use of an online survey to collect data. Given the difficulties of undertaking a controlled study using travellers from multiple cities across Australia, this was the most practical and cost-efficient way of collecting data. This study used Qualtrics™ as a platform for data collection. Since the database is confidential, the researcher had to rely on Qualtrics™ to distribute the survey invitation fully. It is possible that participants did not take the study seriously or did not give adequate thought to their responses. As a result, the limitations of this platform such as lack of control and imprecise responses pose a concern.

The fourth limitation relates to the external validity of the survey whereby it suffers from a lack of generalisability to other travellers as the focus was on the Australian market. Though this market is suitable to investigative pro-environmental consumer behaviour, future studies should inspect other markets and detect cross-cultural implications for promoting green accommodation. Furthermore, the sample size was arguably somewhat small for some of the analyses. The sample was not large enough to enable invariance tests regarding country of origin, marital and employment status of participants.

The fifth limitation, given the lack of available literature on the topic of using positive and negative framing, relates to the design of interventions based on the

researcher's creativity and expertise in the study context. As a consequence, the messages used were not following a rigorous design as their context was different from each other. Moreover, though the framing aspects of these messages were compelling, the positive messages had more text included in the images in comparison to the negative messages. Although the images were chosen as a result of the focus group choice, future research should employ equivalent amounts of text and imagery aspects.

The final limitation of this study stems from the ongoing definitional issues associated with what is exactly meant by a green hotel or green practices. Different researchers acknowledge the lack of a single, universally accepted definition of green hotels. Inevitably, respondents would have different views of what exactly is meant by a green hotel. The respondents' unique interpretations of what comprises "green hotels" influence not only intention measures but also items representing the other constructs.

5.8 Direction for Future Research

This research was conducted to examine the association between the psychosocial factors in predicting travellers' green behavioural intentions to stay at a green hotel in the Australian specific context. The findings from this study, together with the limitations noted in the previous section, provide eight critical avenues for future research. These are discussed below.

First, this research was conducted using the TPB framework. The findings show that although the standard TPB variables and green hotel knowledge predicted travellers' stay at intentions in this study, it is obvious that 58 per cent of the variance in their behavioural intentions remains unexplained, which indicates that other elements outside of the model would assist in explaining the green hotel accommodation behaviour in this population. Studies may investigate other factors within the model (i.e., moral norms, emotions, anticipated regret, self-identity and self-efficacy). In addition, different theories could be applied in the context of consumer behaviour in green hotels such as value-belief-norm theory, the model of goal-directed behaviour, the model of responsible environmental

behaviour and construal level theory as they might provide further insights not included in the TPB model.

Second, this study used a quantitative approach wherein an online survey was the primary source of data generation. This approach has some limitations as outlined in the previous section of this chapter. A different quantitative method, such as field studies, and or qualitative in-depth interviews to triangulate could also be considered. Using a field study, travellers staying at green hotels can be selected, and the data can be collected in a real marketplace regarding their actual behaviour. In addition, implementing experimental design by using other physiological measurement techniques (eye tracking, skin conductance and emotions for video) to evaluate the impact of the intervention and lack of exposure versus the multiple exposure to the images. Further, a qualitative approach using interview techniques can be employed to explore how other stakeholders, such as hotel managers, perceive consumer behaviour in the green hotel context. As a result, triangulation could be used to facilitate the validation of data through cross verification (Creswell & Creswell, 2018). This would assist in verifying the consistency of findings obtained through the online survey and assessing the causes influencing the study results.

Third, as mentioned in the limitations section, this study assessed intentions of travellers which might not lead to actual behaviour. Though intentions are frequently used as a substitute for actual behaviours, it is not certain whether these intentions render into actual behaviours. For this reason, using a longitudinal approach would be beneficial for examining the actual behaviour of travellers who have indicated their willingness to stay at green hotels.

Fourth, further research should be employed to investigate the different intentions between business travellers and leisure travellers. Furthermore, various studies could be conducted to assess whether the findings in this research would still hold when the setting is changed. Hotels of different star ratings (5-star, 4-star or 3-star hotel) or different types (business hotels, leisure hotels, residential hotels and Airbnb) should be considered as the comparison may provide hotel managers with more profound insights into green marketing techniques.

Fifth, referring to the construct of green hotel knowledge, the study focused on travellers' green hotel knowledge as a broad term. As tactic and explicit knowledge would have differential impacts on the decision-making process, further research is warranted in terms of different levels of knowledge. Further, understanding that travellers could identify green products/services is not sufficient in establishing pro-environmental marketing and practices. Future studies should examine which products/services travellers view as essential and what kind of price-quality trade-offs are they ready to take. Future studies may investigate the broader range of green hotel practices. Such understanding can provide more in-depth explanations of issues related to staying at green hotels. As a result, this would enable hotel managers to develop a more vigorous green promotional strategy, in addition to providing travellers with the exact green products/services they seek, and charge accordingly.

Sixth, future research should examine the use of interventions focusing on perceived behavioural control rather than all the TPB constructs. According to Ajzen (2017), it is rational to target an intervention at key determinants that explain substantial variance in intention. In addition, future studies aiming to evaluate the intervention's effectiveness should follow robust research designs that reveal the effectiveness of single as well as combinations of interventions. For instance, future studies need to test the influence of pictorial messages versus text-only messages.

Seventh, future research should assess whether a hotel's implementation of green practices actually influences hotel selection and which of these practices actually affect their decision. As a logical next step, future studies should take into account what hotel managers think about green hotels, and to what extent they may be integrating green programs into their lodging properties. Further research can examine the characteristics of hotel managers and employees who feature such practices. This would assist in providing additional insight into the culture of a green hotel operation from the employees' perspective.

Finally, the current research employed an Australian sample. A larger and more diverse population might result in different, more generalisable findings. Further, to expand knowledge further, future studies are also recommended to replicate

this study in countries other than Australia, to observe whether the constructs of the current research are identified as significant.

5.9 Chapter Summary

This chapter has provided a discussion of the research findings in the two phases. The elicitation study identified the behavioural, normative, and control beliefs and ‘green hotel knowledge' as an additional construct that would contribute to the formation of Australian travellers' purchasing decisions related to staying at green hotels. The quantitative study aimed to test the TPB model and hypotheses of the study. As well as the standard TPB constructs of attitude, social norms, and PBC, the present study also comprised green hotel knowledge.

In addition, this study is one of the few to examine the impact of positive and negative environmental framing on behavioural intentions. The findings confirm the employment of the theory in predicting Australian travellers' intentions to stay at a green hotel. The results have generated substantial evidence related to all hypotheses concerning Australian travellers' intentions to stay at a green hotel except for the impact of descriptive subjective norms. Most importantly, the current research also reveals that perceived behavioural control has the highest impact on travellers' intentions to stay at a green hotel whereas green hotel knowledge adds to the predictive power of the TPB model. In addition, positive framing was found to have a stronger impact on intentions in comparison to negative framing.

A number of theoretical and practical contributions have been discussed. Over and above the valuable insights this research has provided, like all studies, it was faced with several limitations that could impair its generalisability and contributions. Regardless of all the limitations presented, the research provides valued findings and contributes constructively to the body of research knowledge concerning travellers’ behaviour in the green hotel context in Australia and in regards to developing green marketing strategies that, ultimately, increase their intentions to stay at green hotels.

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‘APPENDICES’

Appendix A: Focus Group Guide

Constructs in general	Questions
General Questions	What is the first thing that comes to your mind when you think of a green hotel?
	From your last trip, what environmental practices did you notice in the hotel that you have stayed at?
Behavioural Beliefs	What are the benefits of staying at a green hotel when travelling in the future?
	What are the concerns of staying at a green hotel when travelling in the future?
Injunctive Normative Beliefs	Who of the people important to you would support your staying at a green hotel when travelling in the future?
	Who of the people important to you would not support your staying at a green hotel when travelling in the future?
Descriptive Normative Beliefs	Who, of the people important to you, are most likely to stay at a green hotel when travelling in the future?
	Who, of the people important to you, are least likely to stay at a green hotel when travelling in the future?
Control Beliefs	What would motivate you to stay at a green hotel when travelling in the future?
	What would prevent you to stay at a green hotel when travelling in the future?
Additional Constructs	Are there any additional factors that would affect your decision to stay at a green hotel in the future?

Appendix B: Open-Ended Questionnaire for Focus Groups

TO BE OR NOT TO E GREEN: EVALUATING TRAVELLERS' BEHAVIOUR OF PURCHASING HOTEL ACCOMMODATION IN AUSTRALIA

Please write down your responses on this information sheet. There are no right or wrong responses; the research is merely interested in your personal opinions. In response to the questions below, please list the thoughts that come immediately to mind. Write each thought on a separate line.

(1) What do you see as **the benefits** of your stay at a green hotel when travelling in the future?

---

(2) What do you see as **the concerns** of your stay at a green hotel when travelling in the future?

---

(3) Please list the **individuals who would support** your staying at a green hotel when travelling in the future.

---

(4) Please list the **individuals who would not support** your staying at a green hotel when travelling in the future.

---

(5) Please list **the individuals who are most likely to stay** at a green hotel when travelling in the future.

---

(6) Please list the **individuals who are least likely to stay** at a green hotel when travelling in the future.

---

(7) Please list any **factors or circumstances that would make it easy** or enable you to stay at a green hotel when travelling in the future.

---

(8) Please list any **factors or circumstances that would make it difficult** or prevent you from staying at a green hotel when travelling in the future.

Appendix C: Focus Group Information Sheet and Consent Form

TO BE OR NOT TO BE GREEN: EVALUATING TRAVELLERS' BEHAVIOUR OF STAYING AT HOTEL HOTELS IN AUSTRALIA

Ethics ref no (GU 2016/577)

INFORMATION SHEET

Senior Investigator

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Dr Sandra Kensbock (Associate Supervisor)
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Research team member

Rawan S. Nimri
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rawan.nimri@griffithuni.edu.au

Dear Participant,
Please read this consent document carefully before you decide to participate in this study.

Purpose of the research

This research attempts to provide a more comprehensive understanding travellers' pro-environmental behaviour towards staying at green hotels while business and leisure travellers are away from their homes. This is a PhD research project funded by Griffith Business School.

What you will be asked to do

You will be asked to participate in a focus group along with another 7 to 9 participants in which you are requested to talk about your beliefs about staying at green hotels.

The focus group session will last around an hour and it will be audio recorded. The focus group session will be conducted at a time and place that is appropriate and convenient for the group. Please note, there are no right or wrong answers, simply your opinion is of upmost importance. You are free to refuse to answer any questions, or withdraw from the study at any time without penalty. At the end of the session, you will be asked to fill an information sheet related to the discussed points which will take approximately five minutes.

The basis by which you are selected

The target participants of this study are active Australian travellers who are 18 years and older.

The expected benefits of the research

The focus group session will seek to elicit the beliefs of travellers related to staying at green hotel accommodation. The elicited beliefs will be used in order to build a questionnaire that will be distributed online to examine the factors affecting pro environmental behaviour in the hotel sector.

The findings of the research are expected to improve our understanding about pro-environment consumer behaviour in hotels and practically help hotel managers to improve their operations and marketing plans as well as to increase pro-environment behaviours among travellers.

Risks to you

There are no identifiable risks associated with your participation in this research.

Your confidentiality

Your identity will be kept confidential to the extent provided by law. Any identifying information of both the participants and any person mentioned by the participants will be deleted during the transcription process. Nobody, except for the researcher, Ms. Rawan S. Nimri, will have access to the audio recording of the focus group sessions. The audio recordings will be destroyed immediately after transcription. The coded data will be de-identified after data analysis is completed. The de-identified research data will be stored at Griffith University for 5 years after the project is completed and will then be destroyed permanently.

Your participation is voluntary

Your participation in this study is completely voluntary. There is no penalty for not participating.

Right to withdraw from the research

You have the right to withdraw from the study at any time without consequence. You have the right not to answer any questions. You have the right to ask that information revealed in the course of the session not be used in analysis.

Feedback to you

If you are interested in the results of the study, or wish to receive copies of journal and media publications, please contact Rawan S. Nimri, Griffith University at rawan.nimri@griffithuni.edu.au.

Whom to contact about the ethical conduct of this research

If you have any concerns or complaints about the about the ethical conduct of the research project, you may contact the Manager, Research Ethics on (617) 3735 4375 or research-ethics@griffith.edu.au.

Whom to contact if you have questions about the research

Ms. Rawan S. Nimri, PhD student, Dept. of Tourism, Sport and Hotel Management, Griffith Business School, phone: (617) 3735 5491, email: rawan.nimri@griffithuni.edu.au

Chief investigator / principal supervisor:
Associate Professor Anoop Patiar, Dept. of Tourism, Sport and Hotel Management, Griffith Business School, phone: (617) 3735 4104, email: a.patiar@griffith.edu.au

Rawan S. Nimri

TO BE OR NOT TO BE GREEN: EVALUATING GUESTS' BEHAVIOUR OF PURCHASING HOTEL ACCOMMODATION IN AUSTRALIA

CONSENT FORM
Ethics ref no (GU 2016/577)

Senior Investigator	Associate Professor Anoop Patiar (Principal Supervisor) Griffith Business School, Department of Tourism, Sport and Hotel Management a.patiar@griffith.edu.au Dr Sandra Kensbock (Associate Supervisor) Griffith Business School, Department of Tourism, Sport and Hotel Management s.kensbock@griffith.edu.au
Research team member	Rawan S. Nimri Griffith Business School, Department of Tourism, Sport and Hotel Management rawan.nimri@griffithuni.edu.au

By signing below, I confirm that I have read and understood the information package and in particular have noted that:

- I understand that my involvement in this research will include participating in a focus group session and filling an information sheet at the end of the session;
- I have had any questions answered to my satisfaction;
- I understand the risks involved;
- I understand that my participation in this research is voluntary;
- I understand that if I have any additional questions I can contact the research team;

- I understand that I am free to withdraw at any time, without explanation or penalty;

- I understand that I can contact the Manager, Research Ethics, at Griffith University Human Research Ethics Committee on (617) 3735 4375 (or research-ethics@griffith.edu.au), or Associate Professor Anoop Patiar on (617) 3735 4104 (or a.patiar@griffith.edu.au) if I have any concerns about the ethical conduct of the project; and

- I agree to participate in the project.

Agreement

☐ I have read the procedure described above and I voluntarily agree to participate in the research project.

☐ I have received a copy of the information sheet and all my questions about the research have been answered to my satisfaction.

☐ I agree to be audio recorded and I understand that my recording will be erased once it is transcribed.

☐ I agree to fill an information sheet at the end of the focus group.

Name	
Signature	
Date	

Thank you very much for your participation!

Research Team

The researcher: Ms. Rawan S. Nimri, PhD candidate, Dept. of Tourism, Sport and Hotel Management, Griffith Business School, Griffith University, phone: (617) 3735 5491, email: rawan.nimri@griffithuni.edu.au

The Chief Investigator / Principal Supervisor: Associate Professor Anoop Patiar, MBA, Ph.D., Dept. of Tourism, Sport and Hotel Management, Griffith Business School, Griffith University, phone: (617) 3735 4104 , email: a.patiar@griffith.edu.au

The Associate Supervisor: Dr Sandra Kensbock, PhD / Senior Lecturer, Dept. of Tourism, Sport and Hotel Management, Griffith Business School, Griffith University, phone: (617) 373 56710, email: s.kensbock@griffith.edu.au

Appendix D: Pilot Study Information Sheet and Consent Form

To Be or Not To Be Green: Evaluating Guests' Behaviour of Purchasing Hotel Accommodation in Australia

Ethics ref no (GU 2016/577)

INFORMATION SHEET

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Research team member

Rawan Nimri
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Please read this information sheet carefully before you decide to participate in this study.

Purpose of the research

This research attempts to provide a more comprehensive understanding consumers' pro-environmental behaviour towards staying at green hotels while business and leisure travelers are away from their homes. This is a PhD research project funded by Griffith Business School.

What you will be asked to do

You will be asked to fill an online questionnaire related to staying at green hotels. The questionnaire will take approximately 15 minutes to complete. In addition, you will be recontacted in the coming three to six months to fill a follow up questionnaire if you have stayed at a green hotel or not which will take approximately ten minutes.

The basis by which you are selected

The target participants of this study are general Australian lodging customers who are 18 years and older.

Compensation:

Upon finishing the first online questionnaire, you will enter into a prize draw for two e-gift cards valued at AU$100. Also as you finish the follow up questionnaire three to six months later, you will also enter into a prize draw for two e-gift cards valued at AU$100. The vouchers will be distributed via email.

Prize draw terms and conditions

1. The prize draw is being run by our research team of Griffith University to encourage participation in the research aiming to examine consumer behaviour related to green hotels.
2. By electing to participate, you accept these terms and conditions as governing the prize draw. Instructions on how to enter the prize draw and details advertising the survey form part of the conditions. Any personal information you provide to us in the course of entering the prize draw will be dealt with by us in accordance with our privacy policy (published at http://www.griffith.edu.au/aboutgriffith/governance/plans-publications/griffith-university-privacy-plan).
3. Four prizes (Two prizes for the first questionnaire and two prizes for the follow up questionnaire) will be awarded in prize draw, each prize being Myer Gift Cards and being worth $100. Should the advertised prize become unavailable as a result of circumstances beyond our control, we are free (at our sole discretion) to substitute a cash prize equivalent to the value of the prize advertised.
4. Entry is free (other than the cost of accessing the website, which is your responsibility). Entry is open between # 201# and #201#. Entries received after the closing date will not be accepted.
5. To enter the prize draw, you must:
   a) Be an Australian resident aged 18 years and over, and
   b) Provide a valid postal address.
6. You may not enter the prize draw if you are
   i) A member of the research team,
   ii) Employed by the research team;
   iii) An immediate family member (i.e. a spouse partner, child or sibling) of someone identified at 1 or 2 above.
7. You may only submit one entry in the prize draw.
8. All survey and other materials provided by you become our property. No responsibility is taken for late, lost or misdirected surveys or entries.
9. Following the closing date, the prize winners will be selected randomly from valid entries received. Each entry can only be drawn once.
10. Subject to system malfunction, the draw will occur on #. If the systems supporting the draw are not functioning as they should when the draw is due, the draw will be held as soon as possible once the systems become functional again. Prize winners do not need to be present at the time of the draw.
11. Prize winner names will not be published.
12. The relevant prize will be sent to each prize winner at the postal address they provided with the prize draw entry. If an address has not been supplied, the entry

will be treated in accordance with clause 14. The majority of prizes will be mailed within two weeks of the draw.

13. The right to a prize is not transferable or assignable to another person.
14. If any prize winner cannot be contacted within three (3) months of the draw, then that person's right to the prize is forfeited and the prize will be treated as an unclaimed prize.
15. Only one redraw of unclaimed prizes will take place, and other existing prizes are not affected. The redraw prize winner(s) will be randomly selected from remaining valid entries and notified within two (2) weeks of the redraw. If the redraw prize winner(s) cannot be contacted within three (3) months of the redraw, then we may determine that the relevant prize(s) will not be awarded.
16. Prizes cannot be substituted for another prize at the election of the prize-winner.
17. We are not liable for any loss, expense, damage or injury sustained by any entrant in connection with this prize draw, the prize or redemption of the prize, except for any liability which cannot be excluded by law (in which case, that liability is limited to the minimum allowable by law).
18. We may suspend the promotion if we determine that the integrity or administration of the promotion has been adversely affected due to circumstances beyond its control. We may disqualify any individual who tampers with the entry process.

The expected benefits of the research

The findings of the research are expected to contribute more understanding about pro-environment consumer behaviour in hotels and practically help hotel managements to improve their services and marketing plans as well as to increase pro-environment behaviours among hotel customers.

Risks to you

There are no identifiable risks associated with your participation in this research.

Your confidentiality

The conduct of this research involves the collection, access and/ or use of your identified personal information. The information collected is confidential and will not be disclosed to third parties without your consent, except to meet government, legal or other regulatory authority requirements. A de-identified copy of this data may be used for other research purposes. However, your anonymity will at all times be safeguarded. All research data (survey responses and analysis) will be retained in a password protected electronic file stored at Griffith University for five years after the project is completed and will then be destroyed permanently. For further information consult the University's Privacy Plan at http://www.griffith.edu.au/about-griffith/plans-publications/griffith-university-privacy-planor telephone (07) 3735 4375.

Your participation is voluntary

Your participation in this study is completely voluntary. There is no penalty for not participating.

Right to withdraw from the research

You have the right to withdraw from the study at any time without consequence. You have the right not to answer any questions.

Whom to contact about the ethical conduct of this research

If you have any concerns or complaints about the about the ethical conduct of the research project, you may contact the Manager, Research Ethics on (617) 3735 4375 or research-ethics@griffith.edu.au.

Whom to contact if you have questions about the research

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Feedback to you

If you are interested in the results of the study, or wish to receive copies of journal and media publications, please contact Rawan Nimri, Griffith University at rawan.nimri@griffithuni.edu.au.

Completion and submission of this survey will be taken as your consent to participate in the research.

Thank you very much for your participation. Please keep this participant information sheet for your reference

---

Research Team

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Appendix E: Information Sheet and Questionnaire for the Main Survey

To Be or Not To Be Green: Evaluating Travellers' Behaviour of Purchasing Hotel Accommodation in Australia

Ethics ref no (GU 2016/577)

INFORMATION SHEET

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Please read this information sheet carefully before you decide to participate in this study.

Purpose of the research

This research attempts to provide a more comprehensive understanding travellers' pro-environmental behaviour towards staying at green hotels while business and leisure travellers are away from their homes. This is a PhD research project funded by Griffith Business School.

What you will be asked to do

You will be asked to fill an online survey related to staying at green hotels. The survey will take approximately 12 minutes to complete.

The basis by which you are selected

The target participants of this study are general Australian lodging travellers who are 18 years and older who travel regularly for business or leisure purposes.

The expected benefits of the research

The findings of the research are expected to contribute more understanding about pro-environment consumer behaviour in hotels and practically help hotel managements to improve their services and marketing plans as well as to increase pro-environment behaviours among travellers.

Risks to you

There are no identifiable risks associated with your participation in this research.

Your confidentiality

The conduct of this research involves the collection, access and/ or use of your identified personal information. The information collected is confidential and will not be disclosed to third parties without your consent, except to meet government, legal or other regulatory authority requirements. A de-identified copy of this data may be used for other research purposes. However, your anonymity will at all times be safeguarded. All research data (survey responses and analysis) will be retained in a password protected electronic file stored at Griffith University for five years after the project is completed and will then be destroyed permanently. For further information consult the University's Privacy Plan at http://www.griffith.edu.au/about-griffith/plans-publications/griffith-university-privacy-planor telephone (07) 3735 4375.

Your participation is voluntary

Your participation in this study is completely voluntary. There is no penalty for not participating.

Right to withdraw from the research

You have the right to withdraw from the study at any time without consequence.

Whom to contact about the ethical conduct of this research

If you have any concerns or complaints about the about the ethical conduct of the research project, you may contact the Manager, Research Ethics on (617) 3735 4375 or research-ethics@griffith.edu.au.

Whom to contact if you have questions about the research

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Feedback to you

If you are interested in the results of the study, or wish to receive copies of journal and media publications, please contact Rawan Nimri, Griffith University at rawan.nimri@griffithuni.edu.au.

Completion and submission of this survey will be taken as your consent to participate in the research.

Thank you very much for your participation. Please keep this participant information sheet for your reference

---

Research Team

The Chief Investigator / Principal Supervisor: Associate Professor Anoop Patiar, MBA, Ph.D., Dept. of Tourism, Sport and Hotel Management, Griffith Business School, Griffith University, phone: (617) 3735 4104 , email: a.patiar@griffith.edu.au

The Internal Investigator/ Associate Supervisor: Dr Sandra Kensbock, PhD / Senior Lecturer, Dept. of Tourism, Sport and Hotel Management, Griffith Business School, Griffith University, phone: (617) 373 56710, email: s.kensbock@griffith.edu.au

The Internal Investigator/ Associate Supervisor: Dr Cathy Xin Jin, PhD / Senior Lecturer, Dept. of Tourism, Sport and Hotel Management, Griffith Business School, Griffith University, phone: (617) 555 27413, email: x.jin@griffith.edu.au

The researcher: Ms. Rawan Nimri, PhD student, Dept. of Tourism, Sport and Hotel Management, Griffith Business School, Griffith University, phone: (617) 3735 5491, email: rawan.nimri@griffithuni.edu.au

To Be or Not To Be Green: Evaluating Guests' Behaviour of Purchasing Hotel Accommodation in Australia.

Ethics ref no (GU 2016/577)

I would like to thank you in advance for your time and assistance. Your participation is important to the success of this research. This research attempts to provide a more comprehensive understanding of guests' pro-environmental behaviour towards purchase of green hotel accommodation. In the following survey, there are number of statements about the possibility of staying at a green hotel in the future. The survey should not take more than 12 minutes to complete.

If you need any further information about the research, please click on the information sheet below or contact Ms. Rawan Nimri by emailing rawan.nimri@griffithuni.edu.au

Research Information Sheet

Are you an Australian Resident?

- Yes
- No

How likely are you to stay in a hotel in the near future?

- Very likely
- Somewhat likely
- Not at all likely

We care about the quality of our data. In order for us to get the most accurate measures of your opinions, it is important that you thoughtfully provide your best answers to each question in this survey.

Do you commit to thoughtfully provide your best answers to each question in this survey?

- I will provide my best answers
- I will not provide my best answers
- I can't promise either way

INSTRUCTIONS

In the following section of the survey, there are number of statements about the possibility of staying at a green hotel in the near future.
While hotels are minor contributors to the negative environmental impact of the tourism sector, green hotels are viewed as a key component to environmental sustainability.

A green hotel is defined as a hotel that diligently practices environmental management including recycling waste, towel and linen reuse programs, low-flow taps and shower-heads, automatic climate control and light sensors, and natural ventilation.

Please click on the appropriate circle that best describes your opinion or your level of agreement or disagreement with the following statements:

I believe that by staying at a green hotel when travelling

	Strongly disagree (1)	(2)	(3)	Neutral (4)	(5)	(6)	Strongly agree (7)
I would help to protect the environment.	○	○	○	○	○	○	○
I would contribute to fulfilling my environmental obligations.	○	○	○	○	○	○	○
I would assist in securing a future for next generations.	○	○	○	○	○	○	○
I would be able to experience a healthy environment.	○	○	○	○	○	○	○
I wouldn't be compromising on comfort.	○	○	○	○	○	○	○

For me,

	Definitely unimportant (1)	(2)	(3)	Neutral (4)	(5)	(6)	Definitely important (7)
Helping to protect the environment is	○	○	○	○	○	○	○
Contributing to fulfilling my environmental obligations is	○	○	○	○	○	○	○
Assisting in securing a future for next generations is	○	○	○	○	○	○	○
Experiencing a healthy environment is	○	○	○	○	○	○	○
Not compromising on comfort is	○	○	○	○	○	○	○

When travelling,

	Definitely false (1)	(2)	(3)	Neutral (4)	(5)	(6)	Definitely true (7)
My family/ relatives think I should stay at a green hotel.							
The younger people I know think I should stay at a green hotel.							
My colleagues think I should stay at a green hotel.							
My friends think I should stay at a green hotel.							

When it comes to staying at a green hotel,

	Strongly disagree (1)	(2)	(3)	Neutral (4)	(5)	(6)	Strongly agree (7)
I want to do what my family/ relatives think I should do.							
I want to do what the younger people I know think I should do.							
I want to do what my colleagues think I should do.							
I want to do what my friends think I should do.							

I believe that

	Definitely false (1)	(2)	(3)	Neutral (4)	(5)	(6)	Definitely true (7)
Most of my family/ relatives have stayed at a green hotel when travelling.							
Most of the younger people I know have stayed at a green hotel when travelling.							
Most of my colleagues have stayed at a green hotel when travelling.							
Most of my friends have stayed at a green hotel when travelling.							

When it comes to staying at a green hotel,

	Not at all (1)	(2)	(3)	Neutral (4)	(5)	(6)	Very much (7)
I want to be like my family/ relatives.							
I want to be like the younger people I know.							
I want to be like my colleagues.							
I want to be like my friends.							

I believe that

	Strongly disagree (1)	(2)	(3)	Neutral (4)	(5)	(6)	Strongly agree (7)
Staying at a green hotel is expensive.	○	○	○	○	○	○	○
The location of a green hotel needs to be convenient.	○	○	○	○	○	○	○
The hotel should have visible communications about its green practices.	○	○	○	○	○	○	○
The hotel should participate in environmental certification and eco-labelling.	○	○	○	○	○	○	○

When it comes to staying at a green hotel,

	Strongly disagree (1)	(2)	(3)	Neutral (4)	(5)	(6)	Strongly Agree (7)
If green hotels are expensive, this would make it more difficult for me to stay at one.	○	○	○	○	○	○	○
If the green hotel's location is not convenient, this would make it more difficult for me to stay at one.	○	○	○	○	○	○	○
If the green hotel doesn't have visible communications about its green practices, this would make it more difficult for me to stay at one.	○	○	○	○	○	○	○
If the green hotel doesn't participate in environmental certification and eco-labelling, this would make it more difficult for me to stay at a one.	○	○	○	○	○	○	○

For me, staying at a green hotel is:

Extremely bad (1)	(2)	(3)	Neutral (4)	(5)	(6)	Extremely good (7)
○	○	○	○	○	○	○

For me, staying at a green hotel is:

Extremely undesirable (1)	(2)	(3)	Neutral (4)	(5)	(6)	Extremely desirable (7)
○	○	○	○	○	○	○

For me, staying at a green hotel is:

Extremely foolish (1)	(2)	(3)	Neutral (4)	(5)	(6)	Extremely wise (7)
○	○	○	○	○	○	○

For me, staying at a green hotel is:

Extremely unfavorable (1)	(2)	(3)	Neutral (4)	(5)	(6)	Extremely favorable (7)
○	○	○	○	○	○	○

For me, staying at a green hotel is:

Extremely negative (1)	(2)	(3)	Neutral (4)	(5)	(6)	Extremely positive (7)
○	○	○	○	○	○	○

For me, staying at a green hotel is:

Extremely unenjoyable (1)	(2)	(3)	Neutral (4)	(5)	(6)	Extremely enjoyable (7)
○	○	○	○	○	○	○

For me, staying at a green hotel is:

Extremely unpleasant	(2)	(3)	Neutral (4)	(5)	(6)	Extremely pleasant (7)
○	○	○	○	○	○	○

For me,

	Strongly disagree (1)	(2)	(3)	Neutral (4)	(5)	(6)	Strongly agree (7)
Most people who are important to me think I should stay at a green hotel when travelling.	○	○	○	○	○	○	○
Most people who are important to me would want me to stay at a green hotel when travelling.	○	○	○	○	○	○	○
Most people whose opinions I value would prefer that I stay at a green hotel when travelling.	○	○	○	○	○	○	○
Most people who are important to me will stay at a green hotel when travelling.	○	○	○	○	○	○	○
Most people whose opinions I value will stay at a green hotel when travelling.	○	○	○	○	○	○	○

For me,

	Strongly disagree (1)	(2)	(3)	Neutral (4)	(5)	(6)	Strongly agree (7)
Whether or not I stay at a green hotel when travelling is entirely my decision.	○	○	○	○	○	○	○
I am confident that if I want, I can stay at a green hotel when travelling.	○	○	○	○	○	○	○
I have resources, time, and opportunities to stay at a green hotel when travelling.	○	○	○	○	○	○	○
Compared to an average person, I am familiar with hotels' environmental policies.	○	○	○	○	○	○	○
This is an attention filter . Please select "Strongly disagree"	○	○	○	○	○	○	○
Compared to my friends, I am familiar with hotels' green programmes.	○	○	○	○	○	○	○
Compared to people who travel a lot, I am familiar with hotels' green labels.	○	○	○	○	○	○	○

For me,

	Strongly disagree (1)	(2)	(3)	Neutral (4)	(5)	(6)	Strongly agree (7)
I am willing to stay at a green hotel when travelling.	○	○	○	○	○	○	○
I plan to stay at a green hotel when travelling.	○	○	○	○	○	○	○
I will make an effort to stay at a green hotel when travelling.	○	○	○	○	○	○	○

The following questions are related to you. All information is confidential.

Gender

- Female
- Male
- Other

Age

- Under 20
- 20-29
- 30-39
- 40-49
- 50-59
- 60 and above

Marital Status

- Married
- Widowed
- Divorced
- Separated
- Never married
- Defacto

Employment Status

- Employed full time
- Employed part time
- Self employed
- Unemployed
- Retired
- Student
- Other. Please Specify

Personal Gross Income

- Less than AU$20,000
- AU$20,000 - AU$49,999
- AU$50,000 - AU$79,999
- AU$80,000 - AU$109,999
- AU$110,000 - AU$139,999
- AU$140,000 - AU$169,999
- More than AU$170,000

Country of Birth

- Australia
- New Zealand
- United Kingdom
- China
- India
- Vietnam
- Philippines
- Italy
- South Africa
- Malaysia
- Germany
- Other. Please Specify

Thanks a lot for participating in this survey