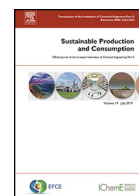




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Research article

Green hotel patronage intention through biospheric values

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ABSTRACT

Although interest in green hotels has been growing, and new challenges have focused on achieving consumers' patronage intention, no studies have considered how biospheric values contribute to the achievement of green hotel patronage intention. This study proposes that biospheric value is a way to achieve this goal. Specifically, it presents a model in which consumers' identification with green hotels makes it possible to achieve customer citizenship behavior; simultaneously, the model makes biospheric values the starting point to achieve consumer identification. The results show that the biospheric values directly influence identification, customer citizenship behavior, and patronage intention, while perceived value acts as a moderator in the relationship between the identification of a consumer and the customer citizenship behavior dimensions. Finally, the managerial implications, limitations of the study, and future scope for research are presented.

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1. Introduction

Environmental issues in the hospitality context has emerged in the marketing literature in recent years (Han et al., 2020), while the concept of green hotels was created several decades ago with the aim of categorizing the hotels that care about protecting the environment (Lee et al., 2010). Developing this concept was not easy, as a significant number of travelers did not value these practices in hotels in the beginning (Vora, 2007). However, green hotels have managed to increase their popularity among guests who prefer to stay in hotels that develop concrete actions for the benefit of the planet (Choi et al., 2015). The concept is associated with certain attributes and actions which, when materialized in the quality of the services they offer (Kim et al., 2017), can increase consumers' willingness to pay more alongside revisit intention (Mishra and Gupta, 2019) and can maintain a long-term relationship with a company (Dang et al., 2020).

Thus, one of the main challenges for green hotels is that guests perceive greater value when staying in this type of hotel (Rahman and Reynolds, 2019) which focuses on actions that help the environment rather than on lowering the operating costs,

which is one of the main barriers to achieving this objective in a green hotel (Baker et al., 2014).

In this case, one of the recommended strategies is to involve customers in the environmental management process (Tung et al., 2017). When faced with a scenario which requires attracting consumers with high biospheric values, a consumer's sense of accomplishment can lead to greater patronage intention (Rahman and Reynolds, 2019). As part of the process, guest shares their values (Gupta et al., 2019) and participate by helping a hotel and other guests, providing feedback, and recommending a hotel to others (Chuah et al., 2020). Therefore, consumers who identify with a company's values are prone toward citizenship behavior, and participate in value co-creation processes as if they were employees of the company (Dang et al., 2020).

In this context, when consumers can connect with a hotel through their identity, which is based on their concern for the environment, it has been observed that biospheric values and environmental attitudes can predict consumers' patronage intention (Rahman and Reynolds, 2019). Thus, if environmental attitude can be materialized in customer citizenship behavior (CCB) in a green hotel that a consumer identifies with, greater repurchase intention could be achieved (Mandl and Hogreve, 2020) as well as green hotel patronage intention (Baker et al., 2014).

A major gap in the hospitality context is understanding the deeper aspects of consumer behavior for green products—for example, green hotels (Rahman and Reynolds, 2019);

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Mondejar-jimenez et al., 2016). As Choi et al. (2015) highlight, more research is needed to study the variables that affect green hotel behavioral intention. In this sense, it is necessary to conduct further research on how biospheric values determine pro-environmental behavior (Nguyen et al., 2016) in the context of hotels (Rahman and Reynolds 2019), such as patronage intention. This is because there is no unanimity on how personal values such as biospheric values influence patronage intention in the literature (Nguyen et al., 2015, 2016).

Thus, the process and chain-of-effects of how and under what circumstances biospheric values increase patronage intention has not been sufficiently investigated in the hospitality context. Since most of the previous literature has focused on analyzing how to achieve patronage intention of a green hotel using the theory of planned behavior as a basis (e.g., Teng et al., 2015; Rahman and Reynolds, 2019), no studies have considered how biospheric values could contribute to the achievement of patronage intention of a green hotel based on a consumer's identification with green hotels and CCB. In the current study, variables of consumers' identification with green hotels and CCB are studied because Choi et al. (2015) indicate that the relationship between consumer values and pro-environmental behavioral intention is stronger when considered with other mediating variables (Stern, 2000). Thus, Choi et al. (2015) study different mediating variables to analyze the process and chain-of-effects of biospheric values to patronage intention in the context of green hotels.

To address this gap, the current study proposes a model to analyze how biospheric values, consumer's identification with green hotels, and CCB are integrated by three dimensions (recommendations, feedback, and helping) that are traditionally part of this behavior, with perceived value as the moderating variable influencing patronage intention. This study aims to resolve the chain-of-effects that biospheric values play in the formation of consumers' identification with green hotels, and show how it influences the CCB dimensions to enhance consumers' patronage intention toward green hotels. Additionally, we determine how consumers' perceived value, as a consequence of their stay at a green hotel, moderates the relationship between their identification with green hotels and each of the three dimensions of CCB.

This study contributes to the environment and hospitality literature in different ways. First, it provides a deep understanding of consumers' behavior toward green hotels (Rahman and Reynolds, 2019; Mondejar-jimenez et al., 2016) by examining the aspects that need further research, as reported by the previous literature, and by analyzing how biospheric values affect patronage intention in the context of green hotels (Nguyen et al., 2015, 2016; Rahman and Reynolds, 2019). Further, to the best of our knowledge, this study is the first to establish consumers' identification with green hotels and CCB as key factors in the chain-of-effect from consumers' biospheric values to patronage intention. Thus, this study determines the factors involved in the process between biospheric values and patronage intention from the perspective of consumers' identification with green hotels, which can help to understand the contribution of biospheric values to patronage intention. Moreover, this study examines the moderating relationship of the behavioral variable, perceived value between constructs, consumers' identification with green hotels, and the dimensions of CCB in its proposed model. In addition, this study was developed in Chile, which is a developing country (Brida et al., 2020), and was given the scarcity of knowledge relating to consumer environmental behavior in developing countries in the hospitality context. Therefore, this study contributes to literature that focuses on Chile. This study was conducted in Chile because most of the studies in developing countries have been carried out in Asia and Africa, while destinations in South America have gone unnoticed

(Bianchi et al., 2017). Chile was chosen because it is the second most important tourist destination in the South American region (Bianchi et al., 2017).

2. Literature review

2.1. Green hotel and CCB for patronage intention

Green hotels are part of the hotels that directly responds to consumers who have ecological purchasing behavior. According to the Green Hotels Association (2020, p. 2), they can be classified 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.”

Although it is generally considered that waste reduction and water conservation are aspects associated with environmentally responsible hotel management (Singh et al., 2014), in practical terms, most hotels have focused their strategy solely on towel reuse policies (Cembruch-Nowakowski, 2019). The literature reports that this practice has been perceived as insufficient by consumers who behave ecologically, and have even classified it as a greenwashing strategy (Chen et al., 2019) that may not be well valued and that consequently decreases customer trust (Chen et al., 2019). Some studies have shown that for a hotel to be classified as truly green, it must focus its efforts on saving energy and water, operating with eco-friendly equipment, display eco-friendly staff behavior, and have bio-food availability (Bastic and Gojcic, 2012).

From the consumer perspective, some studies have reported that those with an environmental orientation prefer hotels that have clear policies on controlled lighting, shower amenities, a towel and linen policy, green certification (Millar and Baloglu, 2011), energy conservation, recycling, and green scaping (Verma and Chandra, 2018). These are especially important for consumers who are characterized by having high levels of biospheric values. From feeling an affinity with this type of hotels, consumers will be more inclined to participate in the hotel processes through CCB. That is, their identification with green hotels, as driven by their biospheric values, can lead them to cooperate voluntarily, discretely, and in a manner that is beyond their role as a hotel guest (Groth, 2005), thus benefiting the hotel and other hosts (Bove et al., 2009).

The social information processing theory could explain this behavior, since it claims that “individuals, as adaptive organisms, adapt attitudes, behavior, and beliefs to their social context” (Salancik and Pfeffer, 1978, p. 226). In fact, consumers could be prone to CCB as a response to what they consider to be the appropriate behavior that is expected of them (Yi et al., 2013) and for having values connected to protecting the environment. As consumers trust information that comes from the environment that is relevant to them, they tend to behave accordingly with this information (Blau and Katerberg, 1982). This is then translated into giving feedback to a hotel with the aim of supporting it in caring for the environment, recommending the hotel to other people, and being willing to help the hotel and other guests if necessary. This CCB, through each of its dimensions, could influence greater patronage intention of a consumer. Under the social exchange theory (SET), expectations could act as an important element to generate this pattern of intentions (Kosiba et al., 2020).

2.2. Biospheric values and identification with green hotels

Biospheric values are incorporated by the value belief norm theory (Stern et al., 1999), which was not initially considered in the norm activation theory (Schwartz, 1977), thus biospheric values

were incorporate to have a better understanding of a person's view of the natural environment (Lee et al., 2013). Value is considered to be most related to the ecological worldview (Hwang et al., 2020). Biospheric values behave in a stable way over time by focusing on the most non-human aspects of the environment (Wynveen et al., 2012). Individuals with strong biospheric values have key concerns for the benefits of nature and the biosphere (Kim and Koo, 2020; Ateş, 2020), and many classify themselves as pro-environmentalists (Hughner et al., 2007). They feel that nature's gravest problems are their own problems (Wagh and Fredrickson, 2006), so much so, that they believe that caring for nature is a way of life that we should all be aware of and concerned about (Kim and Koo, 2020).

People with more prominent biospheric values base their decisions on taking specific actions for the environment (Perlaviciute and Steg 2015), but always consider the cost and benefits for the ecosystem (Choi et al., 2015). Thus, people with marked biospheric values tend to direct their preferences toward pro-environmental services, as seen in the case of green hotels (Rahman and Reynolds, 2019).

Only biospheric value was included in the current study, since other studies deemed it the most appropriate to use in the analyzed model (Lee et al., 2013; Choi et al., 2015). Biospheric values, unlike egoistic and social altruistic values, best predict a consumer's environmental attitude (Choi et al., 2015). Moreover, as noted above, consumers base their attitude on an evaluation of costs and benefits, consider the environment as a whole (De Groot and Steg, 2008), and do not take into account their personal benefits (egoistic) or those of other people (social altruistic) (Choi et al., 2015). This is in accordance with the aim of the current study, which focuses its analysis on green hotels which, by definition, are those that contribute toward caring for the planet (Green Hotels Association, 2020).

One of the variables related to biospheric values is the identification of consumers. As mentioned in the literature, people who self-identify with biospheric values identify with organizations that are in tune with these values (Bhattacharya and Sen, 2003). From this perspective, this identification is an individual's "perceived oneness with or belongingness to an organization" (Bhattacharya et al., 1995 p. 46).

Studies that analyze identification are fundamentally based on social identity theory (Tajfel, 1974). This theory is based on a social psychological analysis of how individuals understand themselves and others in a social context, and is concerned with the perception of belongingness or connection with a particular group (Bhattacharya et al., 1995). People classify themselves within groups and make an effort to become affiliated with them, even if the group places different values on other dimensions that they also consider important (Torres et al., 2017). Under this same identity, group members often express liking, trust, and positive attributions to their groups (Edwards et al., 2019).

This has been evidenced in the case of companies with recognized levels of corporate social responsibility (CSR). Studies have shown that people feel highly affiliated with these types of companies because they allow them to increase their self-esteem by identifying with an ethical and social image (Aquino and Reed II, 2002).

A similar situation occurs in the case of green hotels which, like certain organizations and brands, are used by individuals to achieve their personal goals (Martínez and Del Bosque, 2013). Through green hotels, people develop their sense of identity and self-concept (Wolter et al., 2016) based on their personality traits and values (Runyan et al., 2009) which, in this case, are centered on concern and care for the environment (Hwang et al., 2020). From the above, the following hypothesis is proposed:

H1: the higher a person's biospheric values, the greater their identification with green hotels

2.3. Identification with green hotels and customer citizenship behavior

CCB refers to "voluntary and discretionary behaviors that are not required for the successful production and/or delivery of the service but that, in the aggregate, help the service organization overall" (Groth, 2005, p. 11). A good indicator of consumer willingness is maintaining a long-term relationship with a company (Dang et al., 2020).

A CCB client requires an effort that goes beyond their role as a client, and is translated into their desire to help and support a company's processes (Chuah et al., 2020; Hwang et al., 2020). Through its actions, CCB can contribute to increasing a company's profits (Cheng et al., 2016) and, at an aggregate level, can become a competitive advantage for a company (Yi et al., 2013).

Although some studies have considered CCB to be composed of four dimensions, there is a broad consensus that feedback, recommendations, and helping are the basis for this behavior (Groth, 2005; Aljarah, 2020). Feedback can be defined as a customer's response that is based on a person's experience of using a service facility (Hwang and Lyu, 2018). It is commonly used as valuable information to guarantee the quality of a company's products and services (Sarioglu, 2020), and reduces the customer churn rate (Revilla-Camacho et al., 2015).

A recommendation is also called advocacy or word-of-mouth (WOM), and is defined as highlighting a product or services' positive qualities to other people (Hwang and Lyu, 2018). Customers use WOM communication to disseminate advice, provide information, and support and strengthen purchase decisions (Sarioglu, 2020). It is one of the most credible communication tools for a consumer because it is usually transmitted by a close or trusted person. A recommendation has great influence on decision-making when compared to a commercial advertisement (Söderlund, 1998), thus some consider it a competitive advantage for businesses (Akbari et al., 2016).

Helping consists of assisting others to use a company's product/service appropriately (Groth, 2005), and to solve or warn others about handling possible situations that they have previously experienced (Rosenbaum and Massiah, 2007). Helping can be defined as "customer behavior aimed at assisting other customers" (Yi and Gong, 2013, p. 1281). Bove et al. (2009) state that it is fundamentally based on achieving mutual benefits through the positive exchange of information on issues of common interest, which is concern for the environment in this case.

Although it is true that each of these voluntary behaviors demonstrates consumers' positive attitude in relation to a green hotel, this would not be possible if consumers do not perceive a positive image (Chang and Chieng, 2006) and do not trust this type of company (Kim et al., 2020b). In fact, when the values of an organization coincide with a consumer's personality traits, CCB is more likely to be generated (Taylor et al., 2010). This is in direct relation with Ahearne et al. (2005) findings, as the higher the level of identification, the greater the probability that the client has extra-role behaviors which, in the case of a green hotel, materialize in an attitude that is inclined to recommend a green hotel to others, help a green hotel to improve its services, and help others make a reservation and use the services that a hotel offers. From this viewpoint, the following hypotheses are proposed:

H2: The higher a person's identification level with a green hotel, the higher their CCB level will be, since it positively influences the three dimensions of recommendations, feedback, and helping.

H2a: The higher a person's identification level with a green hotel, the greater their willingness to recommend a green hotel.

H2b: The higher a person's level of identification with a green hotel, the greater their willingness to give feedback to a green hotel.

H2c: The higher a person's identification level with a green hotel, the greater their willingness to directly or indirectly help a green hotel.

2.4. Green hotel customer citizenship behavior and patronage intention

CCB is based on consumer satisfaction with a company. As Groth (2005) explained through the SET, when people benefit from others, they feel obliged to give back to those who benefitted them on the basis of trust and long-term relationships, which last longer than feelings that are based on traditional economic exchanges.

Thus, a satisfied client who trusts a company can give back through CCB and consequently adopt a patronage intention. From this perspective, a consumer's experience is key to forming this patronage intention (Kim, 2005). Based on this experience, Mainwaring (2009) considered it an attitudinal conviction to return patronage behavior.

In the context of a consumer's connection with the environment, it has been observed that biospheric values and environmental attitudes can predict consumers' patronage intention (Rahman and Reynolds, 2019). Specifically, in the case of a green hotel, being perceived as environmentally friendly has a direct effect on consumers by increasing their patronage intention (Baker et al., 2014).

Besides the connection with the values that a consumer and a hotel share, to achieve patronage intention, the psychological connection between both is important, as seen in the case of brands (Fullerton, 2005). This connection can be further strengthened through a guest's CCB activities within a hotel. The fact that a guest acts as a co-producer in a hotel increases the chance that they will connect even more with the values that they share. These activities could include contributing to recycling, reducing the number of towels used, helping a hotel participate in service delivery (Aljarah, 2020), recommending a hotel, and giving feedback. This is connected to different studies which propose that higher levels of BCC could directly affect both repurchase intention (Bove et al., 2009) and patronage intention (Mandl and Hogueve, 2020). Based on this context, the following hypotheses are proposed:

H3: The higher the CCB level exhibited by a guest of a green hotel from the viewpoint of recommendations, feedback, and helping, the higher their green hotel patronage intention will be.

H3a: The higher the CCB level exhibited by a guest of a green hotel from a recommendation viewpoint, the higher their green hotel patronage intention will be.

H3b: The higher the CCB level exhibited by a guest of a green hotel from a feedback viewpoint, the higher their green hotel patronage intention will be.

H3c: The higher the CCB level exhibited by a guests of a green hotel from a helping viewpoint, the higher their green hotel patronage intention will be.

2.5. Perceived value in green hotel identification on customer citizenship behavior dimensions

Although perceived value has been widely analyzed in different contexts, the same cannot be said of green products and services (Chen and Chang, 2012). Customer value has been considered a key variable in consumers' decision-making processes (Papista and Krystallis, 2013; Ponte et al., 2015), and it is not a tangible variable but rather a subjective perception of the consumer (Zeithaml, 1988). Due to its subjective condition, no consensus has agreed on a single definition (Woodruff, 1997). This varies depending on different customers, cultures, and times (Sánchez et al., 2006).

For this study, Chen and Chang's (2012, p. 505) definition was considered. According to these authors, the perceived value should be considered as "a consumer's overall appraisal of the net benefit of a product or service between what is received and what is given based on the consumer's environmental desires, sustainable expectations, and green needs." This is a kind of tradeoff between perceived benefits and perceived costs of a green hotel (Ahn and Know, 2020).

An offer can deliver value to customers when it is capable of providing benefits and differentiators that are superior to that which is offered by competitors (Zeithaml, 1988). Perceived value that is based on a company's genuine concern for protecting the environment can become a company's competitive advantage (Chen and Chang, 2012). As Han and Hwang (2013) argued, focusing efforts on the perceived value of consumers is generally a successful business strategy for a company.

Perceived value is closely related to consumer trust (Kim et al., 2008; Ponte et al., 2015). When trust is generated from a positive experience, it enhances consumers' perceived value and thus influences their behavior (Chen and Hu, 2010). As has been observed, when perceived value is positive, consumers can become inspired to demonstrate civic behavior toward companies (Luo et al., 2018). Thus, customers' perceived value can result in CCB such as recommendations, useful information feedback, and helping others (Chen and Hu, 2010). This is directly related to the various studies that have reported the existence of a close relationship between the value perceived by a consumer and CCB (Luo et al., 2018).

On the other hand, it has also been reported that perceived value is highly related to consumer identification (Chen and Lin, 2019), especially in the context of sustainability. When a company is perceived to be socially responsible, a consumer's identification with that company is greater (Wang and Ho, 2017). In fact, before staying at a green hotel that a consumer may identify with, those who pursue sustainable values tend to consider the perceived value (costs versus benefits) before deciding to visit (Choi et al., 2015).

Considering that perceived value is closely related to CCB (Chen and Hu, 2010) as well as consumer identification (So et al., 2013), it could be argued that the relationships proposed in the current study (i.e., what type of identification with a green hotel influences each CCB dimension) could depend on the value that a consumer perceives in a green hotel. Based on this context, the following hypotheses are proposed:

H4a: If the value perceived by a consumer is higher, the relationship between identification with a green hotel and their willingness to recommend that hotel will be stronger.

H4b: If the value perceived by a consumer is higher, the relationship between identification with a green hotel and their willingness to give feedback to that hotel will be stronger.

H4c: If the value perceived by a consumer is higher, the relationship between identification with a green hotel and their willingness to directly or indirectly help that hotel will be stronger.

Based on these hypotheses, which are derived from the findings of previous research, this study proposes the following conceptual model (Fig. 1).

3. Methods

3.1. Sample selection and characteristics

This study used an online survey method, applied through the Qualtrics questionnaire (Appendix 1), to test the formulated hypotheses herein (Kim et al., 2020a, Choi & Johnson, 2019). We collected data on participants from a large panel in a marketing research company in Chile (Choi & Johnson, 2019). We restricted the data collection to participants of over 18 years of age, who had

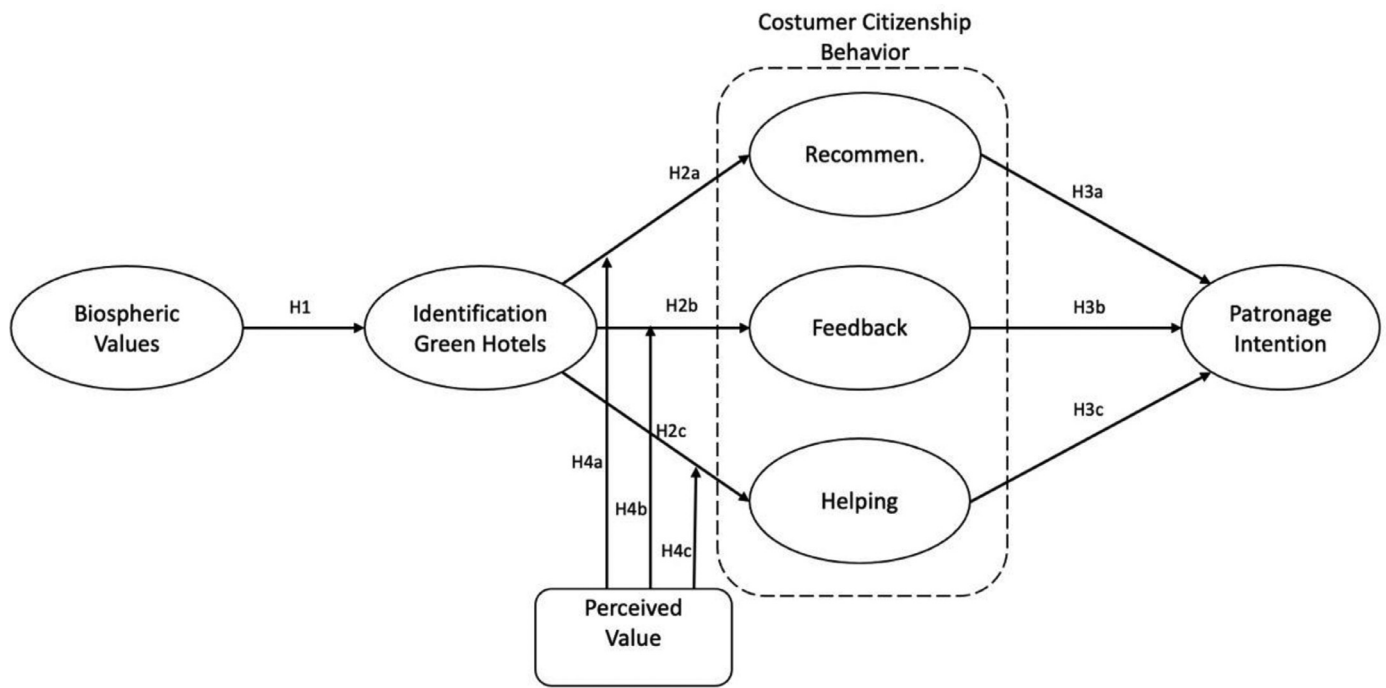


Fig. 1. Conceptual Model.

stayed in one of the 144 hotels in Chile that are certified as green hotels in the past 12 months (Mishra and Gupta, 2019; Servicio Nacional de Turismo-SERNATUR, 2019).

In the introduction online questionnaire section, potential participants were informed about the objectives of the study and were provided with a definition of green hotels and a list of certified green hotels in Chile. Also, participants were informed that answering was voluntary and that their confidentiality would be maintained (Aljarah, 2020; Ojo and Fauzi, 2020),

In the A online questionnaire section, the participants were asked to check again the age, the last stay in a hotel, the name of the green hotel and finally, they were asked to specify at least two activities that the selected green hotel had carried out to take care of the environment in the past 12 months (Aljarah, 2020). In the B section, the participants that had met all the criteria were directed to the Likert questions section referring to the most recent stay in a green hotel in Chile in the past 12 months. Last section contains sociodemographic questions. Questions with different items were rotated so that each participant had a different order of questions (Kim et al., 2020a). The survey was conducted between August and September of 2019, and atypical cases, repeated answers, and incomplete questionnaires were controlled. Of the 472 questionnaires received, 451 questionnaires were fully answered and usable for data analysis. This study followed the 10 times rule of Hair et al. (2017) to meet the sample size, which is “10 times the largest number of structural paths directed at a particular latent construct in a structural model” (Zafar et al., 2020). In addition, we used power analyses by G*Power software (Zafar et al., 2020) to calculate the minimum sample size. These analyses illustrated that the final sample size was adequate.

Of the resulting sample, 47.7% were women, and the average age was 33 years. Moreover, 2.9% had secondary education, 14.9% had technical education, 49.2% had graduated, and 33% were postgraduates. Undergraduate and graduate students accounted for 22%, while 49.7% had a dependent job, 23.1% were self-employed, and 5.1% were unemployed. Finally, more than half (58%) had a monthly income of USD 2994. The participants’ demographics are presented in Table 1.

Table 1
Participants’ Demographics (n = 451).

Gender	Frequency	Percentage
Male	236	52.3
Female	215	47.7
Age		
18–25	94	20.8
26–35	193	42.8
36–45	115	25.5
46–65	49	10.9
Education		
High Education or less	13	2.9
Technical School	67	14.9
Bachelor’s degree	222	49.2
Master’s degree or Doctoral degree	149	33
Occupation		
Student	100	22.2
Employed	224	49.7
Self-employed	104	23.1
Unemployed	23	5.1
Income		
Less than 1360 USD	14	3.1
1361 USD - 1768 USD	14	3.1
1769 USD - 2176 USD	39	8.6
2177 USD - 2584 USD	52	11.5
2585 USD - 2993 USD	70	15.5
2994 USD - 3400 USD	130	28.8
More than 3400 USD	132	29.3

Note. USD = United States Dollar.

3.2. Measures

To develop scales with a sufficient degree of content validity, those that were previously validated in other studies were used. Thus, for biospheric values (3 items), the scale developed by Yadav et al. (2019) was applied. A sample item included: “Protecting the environment.” For identification with green hotels (3 items), the scale of Balaji et al. (2019) was used (3 items). A sample item was: “I strongly identify with green hotels.”

To measure CCB (3 dimensions, 11 items), the scale developed by Groth (2005) was used as a basis. A sample item was: “Explain

to other guests how to use the service correctly.” For patronage intention (3 items), the studies carried out by Baker et al. (2002) and Wang (2009) were considered. A sample item was: “I am willing to stay at this hotel.” All items were answered on a Likert scale from 1 (“totally disagree”) to 7 (“totally agree”) (see Appendix 1).

Finally, the moderating variable of perceived value was measured through a question, as in other studies (i.e., Woodruff, 1997; Oh, 1999). It was measured as a subjective trade-off (Zeithaml, 1988) by asking subjects: “For your stay at this hotel, please describe the overall value you received for the price you paid.” This measure of customer value was anchored between 1 (“much worse than expected”) and 7 (“much better than expected”), following the same criteria that was previously mentioned by the authors.

According to the literature, the current study used statistical solutions in the self-administration of the questionnaire to reduce common method bias in the data collection from single participants (Ojo & Fauzi, 2019). During data collection, participants’ confidentiality was maintained. The questions included in the questionnaire made it impossible to delineate individual participants, and verified the simplicity and clarity of the survey (Ojo & Fauzi 2019; Aljarah, 2020). Moreover, in the questionnaire, questions with different items were rotated so that each participant had a different order of questions. For statistical verification, we performed Harman’s single factor test in which the highest single variance obtained was 44.1, denoting that no single factor accounted for the majority of variances, as one factor explained less than 50% of the variance (Kim et al., 2020a). We calculated the variance inflation factor values that were less than 3.3 (Kock, 2015). Both values met the required conditions (Ojo and Fauzi, 2020; Ali et al., 2020; Kock, 2015). Thus, common method bias was not a problem in this study.

All scales were translated from English into Chilean Spanish in Chile. The process consisted of ensuring the accuracy of the translation was as follows: first Chilean natives translated the scales into Spanish considering both linguistic and cultural validation. The scales were then translated into English by a group of native speakers and we compared the concept, meaning and equivalence in tone and expression. Finally, the Chilean Spanish scale was evaluated by a group of colleagues and students (Brislin, 1970).

4. Results

4.1. Reliability and dimensionality analyses

Exploratory factor analysis with principal components and varimax rotation was performed to evaluate the dimensionality of the scales (Anderson and Gerbing, 1988). This analysis yielded six factors grouped according to the items that made up each of the constructs included in this study, with a total explained variance of 77.57% (KMO: 0.917; Bartlett’s test: $\chi^2 [190] = 6480.97, p < 0.00$).

Subsequently, Cronbach’s alpha was calculated to evaluate the initial reliability of each of these constructs and considered a minimum value of 0.7 (Nunnally, 1978) (Table 2). In all cases, the scales fulfilled this requirement and the items showed an item-total correlation of greater than 0.3 (Nurosis, 1993).

A model development strategy was then carried out following the recommendations of Jöreskog and Sörbom (1993). The idea was to eliminate from the analysis items that did not guarantee a good dimensional structure of the scales. That is, they did not meet $t > 2.58$ ($p = 0.01$) with standardized factor loading of equal to or greater than 0.5, or with R^2 equal to or greater than 0.3. Statistical software AMOS version 25 was used for the analysis. It was not necessary to eliminate items from any of the scales. The confirmatory analysis showed acceptable adjustments: root mean square error of approximation (RMSEA) = 0.071; incremental fit index

(IFI) = 0.943; comparative fit index (CFI) = 0.943; Tucker-Lewis index (TLI) = 0.932; and Normed $\chi^2 = 3.298$.

After establishing the final reliability of each of the measurement scales, two analyses were carried out: composite reliability coefficient (CR) (Jöreskog, 1971) and average variance extracted (AVE) (Fornell and Lacker, 1981). These analyses offered satisfactory results, as shown in Table 2 (CR must be greater than 0.7 and AVE must be higher to 0.5).

4.2. Construct validity

Construct validity can be guaranteed through convergent and discriminant validity. Convergent validity was confirmed after observing that in all the scales, the standardized coefficients shown by the confirmatory model were statistically significant at 0.01 and greater than 0.50 (see Table 2). Discriminant validity was confirmed after observing that the square root of the AVE of each construct in all cases was higher than the correlations between the different constructs (Bagozzi et al., 1991; Anderson and Gerbing, 1988) (Table 3).

4.3. Structural model analysis

To test the hypotheses, a structural equation model (SEM) was used. The fit indices of the model suggest that they were within reasonable values: RMSEA = 0.071; IFI = 0.945; CFI = 0.944; TLI = 0.932; Normed $\chi^2 = 3.293$.

As can be seen in Fig. 2, consumers’ identification with green hotels has an acceptable coefficient for goodness-of-fit ($R^2 = 0.511$). Specifically, biospheric values directly and positively affect a person’s identification with a green hotel ($\beta = 0.715; p < 0.01$). This allows hypothesis H1 to be supported.

On the other hand, the results show that this identification with green hotels directly and significantly affects each of the dimensions of CCB. That is, identification with green hotels affects recommendations ($\beta = 0.839; p < 0.01$), helping ($\beta = 0.811; p < 0.01$), and feedback ($\beta = 0.670; p < 0.01$), with an acceptable coefficient of goodness-of-fit ($R^2 = 0.704; R^2 = 0.658$, and $R^2 = 0.449$, respectively). These antecedents support hypotheses H2a, H2b, and H2c, and consequently support H2.

Moreover, the results also show that patronage intention has an acceptable coefficient of goodness-of-fit ($R^2 = 0.590$). Specifically, the analyses show that a higher CCB, from the viewpoint of recommendations, helping, and feedback, directly and significantly affects patronage intention ($\beta = 0.502; p < 0.01; \beta = 0.149; p < 0.01; \beta = 0.225$; and $p < 0.01$, respectively). These results support hypotheses H3a, H3b, and H3c, and consequently support hypothesis H3.

Note: Significance ** $p < 0.01$

4.4. Multi-sample analysis

To understand how perceived value of a green hotel that a person has visited moderates the relationship between identification with green hotels and each of the three dimensions of CCB, a multi-sample analysis was carried out and conformed two groups, depending on the level of perceived value. For the conformation of these two groups, the arithmetic mean of this variable was considered. The first group consisted of 138 cases, representing those who perceived a lower value of the green hotel they visited. The second group consisted of 313 people, representing those who perceived a greater value of the green hotel. As the size of these samples was within the acceptable range for this type of analysis in SEM (Hoyle, 1995) and all constructs included in this study showed high load factorials and reliability indices (Lacobucci, 2010), we decided to continue with the analysis.

Table 2
Psychometric properties of the measurement scale.

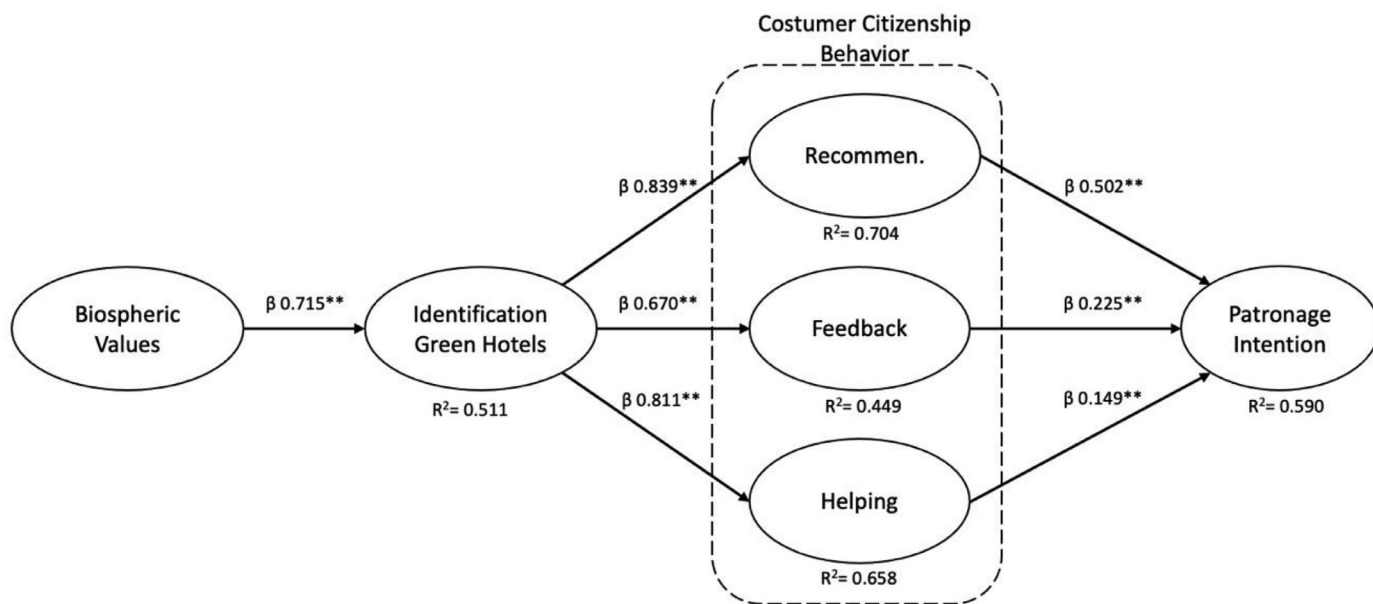
Construct and items	SFL	CR	AVE	Cronbach's Alpha
Biospheric Values		0.848	0.652	0.834
BV1	0.713**			
BV2	0.869**			
BV3	0.833**			
Identification Green Hotel		0.745	0.494	0.745
IGH1	0.699**			
IGH2	0.732**			
IGH3	0.676**			
Recommendation		0.939	0.793	0.937
REC1	0.793**			
REC2	0.920**			
REC3REC4	0.913**0.930**			
Helping		0.903	0.757	0.896
HELP1	0.910**			
HELP2	0.914**			
HELP3	0.780**			
Feedback		0.875	0.638	0.870
FB1	0.782**			
FB2	0.877**			
FB3FB4	0.839**0.684**			
Patronage Intention		0.838	0.635	0.832
PI1	0.673**			
PI2	0.860**			
PI3	0.844**			

Note. SFL= Standardized Factor Loadings, CR= Composite Reliability Coefficient, AVE= Average Variance Extracted. Significance ** $p < 0.01$.

Table 3
Inter-construct correlations and square root of AVE.

Construct	Mean	SD	BV	IGH	REC	HELP	FB	PI
BV	5.782	1.071	0.808					
IGH	4.796	1.275	0.470	0.703				
REC	6.062	1.006	0.555	0.472	0.891			
HELP	5.538	1.098	0.511	0.494	0.637	0.870		
FB	6.009	0.841	0.352	0.315	0.505	0.612	0.799	
PI	5.405	1.070	0.472	0.467	0.668	0.593	0.535	0.797

Note. The off-diagonal factors are the correlations among the constructs. The bold diagonal factors are the square root of AVE. SD= Standard Deviation, BV= Biospheric Values, IGH= Identification Green Hotel, REC= Recommendation, HELP= Helping, FB= Feedback, PI= Patronage Intention.



Note: Significance ** $p < 0.01$

Fig. 2. The estimated structural model.

Table 4
Multi-sample analysis: Moderating effect of perceived value.

Hypotheses Code	Constraints	Standardized coefficient (less PV)	Standardized coefficient (more PV)	χ^2 differences	Significant differences (p)	Result
H4b	IGH – FB	0.485**	0.736**	1.180	0.001**	Supported
H4c	IGH- HELP	0.749**	0.816**	4.039	0.044*	Supported
H4a	IGH - REC	0.867**	0.836**	0.212	0.646	Unsupported

Note: Significance * $p < 0.05$; ** $p < 0.01$. IGH= Identification Green Hotel, REC= Recommendation, HELP= Helping, FB= Feedback, PV= Perceived value.

Table 4 shows that the level of perceived value has a significant moderating effect in two of the three causal relationships included in the analysis, which are the effect of identity with a green hotel both on the feedback and helping variables. These results support hypotheses H4b and H4c but not H4a. Specifically, the results of this multi-sample analysis show that the causal relationship between identification with green hotels and feedback becomes significantly narrower for the people who perceived a higher value ($\beta = 0.736$; $p < 0.01$) compared with those who perceived a lower value of their stay at the green hotel ($\beta = 0.485$; $p < 0.01$). The same occurs for the relationship between identification with green hotels and helping. The relationship becomes significantly closer for a better perception of a green hotel ($\beta = 0.816$; $p < 0.01$) compared to those who perceived less value of their visit to a green hotel ($\beta = 0.749$; $p < 0.01$). Finally, perceived value has no significant relationship between the influence of identification with green hotels on recommendation because no significant difference was found between the two perceived value groups, and the value of the difference significance is higher than 0.05 ($p = 0.646$).

5. Discussion

The objective of this study was to propose a model to analyze how biospheric values, consumers' identification with green hotels, CCB (integrated by the three dimensions that are traditionally part of this behavior: recommendations, feedback, and helping), and perceived value, as a moderating variable, influence patronage intention. According to prior research, there is no unanimity on how personal values, such as biospheric values, influence patronage intention (Nguyen et al., 2015, 2016), thus more research on how biospheric values determine patronage intention is necessary (Nguyen et al., 2016) in the hotel context (Rahman and Reynolds 2019). This study first establishes consumers' identification with green hotels and CCB as key factors in the chain-of-effect from consumers' biospheric values to patronage intention. In this vein, this study determines the factors involved in the process between biospheric values and patronage intention from the perspective of consumers' identification with green hotels, which helps to understand the contribution of biospheric values to patronage intention. Moreover, this study examines the moderating relationship of the behavioral variable and perceived value between constructs of consumers' identification with green hotels and the dimensions of CCB (recommendations, helping, feedback) in the proposed model. To the best of our knowledge, this study is the first to analyze the moderating variable of perceived value in the relationship between consumers' identification with green hotels, the subcomponents of CCB, and the process and chain-of-effects through biospheric values, which leads to increased consumers' patronage intention via their identification with green hotels and CCB. Moreover, this study is the first to be conducted in Chile, since Chile is the second most important tourist destination in the South American region (Bianchi et al., 2017). Most of the research on developing countries has been conducted in Asia and Africa, and South American destinations have gone unnoticed (Bianchi et al., 2017).

This study contributes to the area of hospitality and the environment by considering consumers' identification with green hotels and CCB as key factors in the process and chain-of-effects

from the biospheric values to patronage intention in the hospitality management area with green issues. By determining this process and chain-of-effect, we contribute to the knowledge on how biospheric values determine patronage intention. Further, each of the links in this process and chain-of-effect provides significant contributions. The results of this study show the positive relationship between biospheric values and consumers' identification with green hotels. As the analyzed model shows, consumers' identification with green hotels is based on the biospheric values present in a consumer. This paves the way for a consumer to become involved in a hotel's processes and generates patronage intention. This result coincides with Yadav et al. (2019) findings in the relationship between biospheric values and consumers' attitudes to green hotels. In a different context, Soyez (2012) also confirmed a significant positive relationship between biospheric values and consumers' attitudes. Moreover, Choi et al. (2015) highlight that biospheric values are the ones that best predict an environmental attitude compared to other consumer values. As the context of green hotels is specific, the identification of a guest with this type of hotels is very important. Consumers perceive that these types of hotels care about the environment, which coincides with their values, and a stronger sense of identity is formed to reaffirm their self-concept (Wolter et al., 2016) by focusing on the fact that it is important to respect the earth and protect the environment (Yadav et al., 2019).

Based on the results, consumers with strong biospheric values will identify more with green hotels. It is suggested that green hotel managers should implement communication campaigns to enhance consumers' concern about the environment and the biosphere—and thus consumers' biospheric values—to achieve greater consumer identification with green hotels. Moreover, green hotels can segment consumers to identify those who have high environmental concern and prefer to stay in green hotels that offer them the chance to participate in environmental activities (Yadav et al., 2019). Further, green hotel managers can develop a positive and strong bond between consumers with high environmental concern, green hotels, and other environmental organizations by generating a sense of community via associating with brands or organizations that have recognized prestige that is based on caring for the environment and the planet (Ahn and Kwon, 2020).

This study also indicates that consumers' identification with green hotels enhances CCB through the dimensions of recommendations, helping, and feedback. Moreover, our findings indicate that the influence of consumers' identification with green hotels in the dimensions of CCB are recommendations, helping, and feedback, in that order. Consumers with stronger identification with a green hotel show higher customer willingness in recommending green hotels, offering help to other consumers, and providing feedback. That is, green hotel guests recommend the hotel to friends, family, and relatives; give advice, demonstrate, and explain the different green hotel services to other guests; and give advice to employees to improve green hotel services. Clearly, green hotel managers should aim to strengthen consumers' identification with green hotels because this will lead to the greater likelihood of recommending the green hotel and its interests, consumer-consumer help, and providing feedback to the green hotel to improve its

product and processes. This result is consistent with Mandl and Hoguevev (2020) in another context, as well previous conceptual studies in another context (McAlexander et al., 2002; Schau et al., 2009) that predict the influence of consumers' brand identification on co-creation activities or overall CCB without introducing its dimensions. In fact, a consumer's identification with a green hotel is important in achieving a greater commitment of the client with the hotel processes, to the point of wanting to perform tasks beyond what is considered typical, or what is contemplated in their obligation as a guest (Ahearne et al., 2005; Chuah et al., 2020). Considering the current study's results, green hotel managers need consumers to have greater biospheric values to increase their identification with green hotels and the three CCB dimensions in this process, which can then have a positive influence on patronage intention. To increase CCB via recommendations, helping, and feedback, green hotels should invest in consumers' identification with green hotels. To increase this, green hotels should contribute via resources and provide instruction to their employees (Mandl and Hogueve, 2020; Schau et al., 2009). For instance, green hotel managers should use social media platforms such as Facebook, Instagram, and TripAdvisor to interact with consumers and display their CSR activities to reinforce consumers' identification with green hotels (Aljarah, 2020; Mandl and Hogueve, 2020). Moreover, employees, especially those in direct contact with guests, might interact with guests by communicating to them the CSR strategies to improve consumers' identification with green hotels (Aljarah, 2020; Mandl and Hogueve, 2020). Further, the empirical evidence from this study suggests that CCB, through its three dimensions of recommendations, feedback, and helping, leads to enhanced consumer patronage intention with green hotels. This result partially coincides with Mandt and Hogueve (2020) in another context, who confirmed the direct effect of helping and recommendations on patronage intention but not feedback. This study's findings indicate that the CCB dimensions that lead to patronage intention are recommendations, feedback, and helping, in that order. Thus, patronage intention with green hotels can occur through the central role of consumers' recommendations of the hotel to family, friends, and relatives; providing feedback to the employees about the different services of the green hotel; and helping other guests and customers. Green hotel guests are more willing to recommend a green hotel and provide suggestions to the green hotel's management that explain, assist, or teach other consumers about green services. These results are relevant in understanding in greater depth how patronage intention toward green hotels can be achieved. In fact, it shows that the participation of guests in the value co-creation process of a green hotel by CCB is key. In short, a guest's interactions with both hotel employees and other guests are highly valued by customers (Ariffin, 2013). Specifically, when customers become involved in recommending the hotel to their close friends and others, give feedback on the hotel's management, and help guests and others, it enables a very strong guest approach with this type of hotel (Tuan et al., 2019) to the point that it contributes to achieving patronage intention with green hotels. Consequently, it is suggested that green hotel managers encourage consumers to recommend their hotels, provide feedback to hotel managers about their experiences in the hotel, and help others. The managers might use social media platforms to motivate consumers to participate in the co-creation process.

Finally, the results of this study concern perceived value of consumers in green hotels as a moderator in the relationship between consumers' identification with green hotels and CCB, and can extend the knowledge of the role of perceived value as a moderator between consumers' identification with green hotels and the three dimensions of CCB in the green hotel context. The results confirm that perceived value moderates the relationship between consumers' identification with green hotels and the feedback and

helping dimensions of CCB, which have a significantly higher moderating effect on consumers who have a higher perceived value of their stay at green hotels than those with a lower perceived value of consumers. Thus, consumers' identification with green hotels that perceive less value are less likely to help guests and others learn about green hotels and provide feedback to improve hotel management when compared to consumers with higher perceived value. However, perceived value does not moderate the relationship between identification with green hotels and recommendations of green hotels to families, relatives, and others. Thus, the strength of the relationship between identification with green hotels and recommendations of green hotels does not vary depending on the perceived value of consumers in their stay at a green hotel. As this is the first study to examine the moderating role of consumers' identification with green hotels and the three dimensions of CCB, we cannot compare results with the previous literature. However, according to Ahn and Kwon (2020), perceived value is relevant to green hotel service providers in developing countries as no study has analyzed the moderating role of perceived value in relationship identification and CCB. A logical explanation for the result that perceived value does not moderate the relationship between identification with green hotels and recommendations is that regardless of perceived value of green hotels to consumers, the higher a consumer's identification with a green hotel, the more likely that a consumer will recommend the hotel to their family and others. Based on this finding regarding perceived value as a moderator factor, it is recommended that green hotel managers should elaborate and implement differentiated communication strategies according to consumers' perceived value that influences the responses of each group.

6. Conclusion

This study contributes to the literature by proposing and testing a model that determines the process and chain-of-effects of how biospheric values could contribute to the achievement of green hotel patronage intention, based on consumers' identification with green hotels and the three dimensions of CCB (recommendations, feedback, and helping). Moreover, this study analyzes the moderating effect of perceived value of consumers, from their stay at green hotels, in the relationship between the variables of consumers' identification with green hotels and the three dimensions of CCB. Our findings affirm the process and chain-of-effects between consumers' biospheric values and green hotel patronage intention as well as the moderating effect of perceived value in the relationship between consumers' identification with green hotels and two dimensions of CCB (helping and feedback). These findings provide a deep understanding of consumer behavior for green hotels by analyzing the aspects that have been reported in the literature as needing further research in this context. Moreover, the current study extends the knowledge on the process and chain-of-effects between consumers' biospheric values and green hotel patronage intention in the context of South American emerging markets.

Concerning limitations and future studies, it would be advisable for green hotels to use data mining tools to identify people who have prominent biospheric values. Through these tools, a more effective marketing communication could be achieved by focusing on the common aspects that allow for a greater identification of people with green hotels. Achieving this identification will be the starting point for a CCB host. Moreover, green hotels should provide facilities for their guests to feel part of the hotel's co-creation process by focusing on the fact that they can collaborate to help the planet. These participatory situations should be focused on motivating guests to give feedback, for example, by regarding their experience at the hotel in relation to the quality of service, the infrastructure, and especially in relation to the effectiveness of the

actions that the hotel conducts to take care of the environment. Simultaneously, guests who wish to help other guests who require information about specific places inside and outside of the hotel during their stay should be provided with the conditions to do so. This even considers the fact that guests can help hotel employees in specific situations without affecting the delivery of service. Finally, conditions must be offered for guests to recommend the hotel to other people, either through personal interactions or by leaving comments and encouraging other people to visit the hotel on social media networks, which can thus contribute toward caring for the environment.

This study is not without limitations. Given the nature of data, this study has provided the basis of a model that determines the process and chain-of-effects of how biospheric values contribute to the green hotel patronage intention. However, this research does not indicate the profile of hotels where consumers have stayed. Additional research is now required to extend the questionnaire to include questions to capture the characteristics of green hotels where the consumers have stayed. Furthermore, to extrapolate the results, the context and culture of the sample imply important limitations, but they may also imply a future line of research. The identification with green hotels and biospheric values could vary between cultures. Another interesting line of research could include neurophysiological interrogation methods to investigate how the green actions of hotels, as advertised on their websites, influence patronage intention. Moreover, this study was cross-sectional, and measured the variables at a single point in time; therefore, future research is recommended to analyze the validity of the proposed model via longitudinal analysis. Finally, it would be interesting to investigate how the application of co-creation and green innovation to the sector could lead to greater patronage intention.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:[10.1016/j.spc.2021.01.028](https://doi.org/10.1016/j.spc.2021.01.028).

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