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Understanding in-room water conservation behavior: The role of personal normative motives and hedonic motives in a mass tourism destination

1. Introduction

Despite its undeniable importance in driving economic development and growth in tourist areas, tourism creates many negative externalities that can harm destinations in several ways (Scott, Hall, & Gössling, 2019). The uncontrolled and unplanned development of mass tourism destinations has caused major problems such as ecological disasters and resource overexploitation (Ioannides & Holcomb, 2003). The pressure exerted by tourism has become particularly noticeable along Spain's Mediterranean coast, where many destinations (e.g. Benidorm) receive massive numbers of visitors, experience highly seasonal demand, and have a dense concentration of tourists staying in hotel facilities (Rico-Amoros et al., 2013). Accordingly, the study of hotel tourists' demand for water is exceedingly relevant. A deeper understanding of guests' behavior in these destinations could contribute to the development of social marketing strategies to reduce water overuse and encourage more sustainable behaviors (Miao & Wei, 2016).

Identifying the factors that influence guests' water conservation behavior can prove particularly useful in developing these social marketing strategies. The bulk of framing studies have predicted water conservation behavior or intention using only social or cognitive drivers (e.g. Han & Hyun, 2018b; Han, Yu, Koo, & Kim, 2019). These studies have primarily used the norm activation model (NAM; Schwartz & Howard, 1981) to explain guests' water conservation behavior. They have empirically shown that the personal normative process, comprising personal norms (also known as moral obligations or moral norms), problem awareness, and ascription of responsibility, are important antecedents of this type of responsible behavior (e.g. Han & Hyun, 2018a; Kiatkawsin & Han, 2017). However, affective determinants, such as an individual's perception of greater pleasure when performing pro-environmental behaviors or, conversely, the perception that such behaviors are not enjoyable, can also play a key role in explaining water conservation behavior at hotels (Steg, Bolderdijk, Keizer, & Perlaviciute, 2014). Thus, recent studies (e.g. Miao & Wei, 2016; Wang, Wu, Wu, & Pearce, 2018) have shown that the likelihood that an individual behaves pro-environmentally in a hotel is predominantly a negative function of motives such as personal comfort and enjoyment (hedonic motives).

Given the importance of personal normative motives and hedonic motives, the research question of this study is to understand how these factors affect guests' water conservation behavior. In the case of personal normative motives, the study examines not only the output of the normative process (personal norms) but also the variables involved in this process: ascription of responsibility, outcome efficacy, and problem awareness. This study also examines the moderating influence of personal norms in the relationship between hedonic motives and guests' water conservation behavior. The present study contributes to the literature in the following ways. First, guests' water conservation behavior is explained using not only personal normative motives (cognitive determinants) but also hedonic motives (affective determinants). Regarding personal normative motives, the model includes a previously neglected variable (outcome efficacy) and a new variable (local problem awareness), which may play an important role in the norm activation process. Furthermore, personal norms are proposed as a possible moderator of the relationship between hedonic motives and guests' water conservation behavior. Second, this study is one of the first to explain in-room water conservation behavior using data from actual hotel guests during their stay in a sun, sand, and sea mass tourism destination. The setting for this study is a specific European destination of this type, namely Benidorm (Spain). Sustainable tourism studies of guests' water conservation using samples of European and Spanish tourists are scarce. Therefore, this study can broaden scholars' understanding of such behaviors. Finally, this study measures water conservation behavior by considering specific actions related to guests' in-room water conservation behavior rather than using a general measure. This study is aligned with a recent stream of research in environmental psychology (e.g. Casaló, Escario, & Rodriguez-Sanchez, 2019; Gatersleben, Murtagh, & Abrahamse, 2014; Karlin et al., 2014) calling for the study of specific activities instead of aggregate constructs to explain individuals' pro-environmental behavior.

The rest of the manuscript is structured as follows. Section 2 briefly discusses guests' water conservation behavior at hotels in past studies, highlighting the limitations or flaws of these studies. Additionally, the theory on personal normative motives and hedonic motives in the lodging context is discussed. The research hypotheses are also presented. Section 3 describes the context, sample, variables, and method. Section 4 presents the results of the analysis. Section 5 discusses the main findings and the implications for managers and scholars. The paper then concludes with a discussion of the limitations of the study and suggestions for future research.

2. Theoretical framework

2.1. Guests' in-room water conservation behavior

Water use by hotel guests can be divided into two categories: direct use and indirect use (Gössling et al., 2012). Average direct water use, the most widely analyzed and extensively used indicator, has been estimated to be in the order of 350 liters per guest per night, including water use in rooms, gardens, and pools (Gössling, 2015). Of all these forms of consumption, in-room use (e.g. linen/towel exchange and toilet flushing) encompasses the behaviors that are most susceptible to interventions aimed at reducing guests' direct water consumption (Gössling, Araña, & Aguiar-Quintana, 2019). The potential of such actions to influence in-room water use derives from the fact that in most cases, this use is due to activities that are under the guests' control, and the primary motives for high water consumption are guests' behavioral tendencies (Untaru et al., 2016). For example, guests at highly rated hotels are more prone to pleasure-seeking behavioral tendencies (e.g. taking long relaxing baths every day) and to consuming more water than they usually do at home (Untaru et al., 2016). Despite the importance of studying guests' in-room water consumption or conservation during stays at conventional hotels, relatively few studies based on behavioral models have addressed this issue. This area of research is limited not only in terms of the number of studies but also in terms of the actions considered, the methods used, and the ways in which different theories and psychological factors have been used or misused.

First, most studies have measured general water consumption or conservation (e.g. 'I plan to conserve water in a lodging context when traveling') instead of specific activities in the room (e.g. Han & Hyun, 2018a, 2018b; Untaru et al., 2016). Therefore, research has yet to respond to calls for the study of specific activities to characterize individuals' pro-environmental behavior (Casaló et al., 2019). Second, past studies have characterized this behavior primarily using cognitive factors such as environmental concern, attitudes, or norms (e.g. Han & Hyun, 2018a; Han, Yu, Koo, & Kim, 2019; Kiatkawsin & Han, 2017). However, affective motives can alter the extent to which individuals interact with their surroundings, thus influencing their pro-environmental behavior (Coelho et al., 2017; Steg et al., 2014). Third, previous studies have relied on online survey panel members who have traveled recently (last 6–12 months) to form the sampling frame (e.g. Han, Lee, & Kim, 2018; Miao & Wei, 2016) or have employed student samples rather than using actual hotel guests (e.g. Dolnicar & Leisch, 2008; Han et al., 2019). The use of such samples prevents control of the context where the behavior

takes place. Yet the literature suggests that the climate where the hotel is located is actually a major factor of water consumption in hotels (Mclennan, Becken, & Stinson, 2017). The same is true of the seasonality of the destination (Tortella & Tirado, 2011). Most previous studies have analyzed generic water consumption in recent hotel stays rather than focusing on a specific tourist destination, even though such a focus could help control for potential differences in these contingent factors. Finally, most studies using behavioral models of guests' water consumption or conservation have been conducted using individuals from the United States (e.g. Han & Hyun, 2018b; Miao & Wei, 2013) or East Asian countries (e.g. Dolnicar & Leisch, 2008; Han, Lee, Trang, & Kim, 2018). Therefore there is a need for research in other areas.

This study intends to overcome the aforementioned limitations of past studies in the hotel context. It is one of the first to explain in-room water conservation behavior using data from actual hotel guests during their stay. The study was conducted in a specific European destination in Spain (Benidorm). Water conservation behavior was measured by considering specific actions related to guests' in-room water conservation behavior rather than a general measure. Furthermore, building on environmental psychology theories such as goal-framing theory (Lindenberg & Steg, 2007) and the norm activation model (NAM, Schwartz & Howard, 1981), this study examines the importance of cognitive determinants (personal normative motives) and affective determinants (hedonic motives) in explaining guests' in-room water conservation behavior.

2.2. Personal normative motives and hedonic motives

People may have multiple motives (i.e. the forces that drive their reactions) to behave pro-environmentally (Stern, 2000). One influential framework explaining the existence of these multiple motives is the goal-framing theory (Lindenberg & Steg, 2007). This theory proposes that three main goals govern or 'frame' the way people process information and act pro-environmentally. These are the 'normative goal' (to act appropriately), the 'hedonic goal' (to feel better right now), and the 'gain goal' (to protect or improve one's resources). In addition, this theory posits that one goal is focal and is more influential in decision making (i.e. it is the goal frame), while the other goals act in the background to strengthen or weaken the influence of the focal goal. This study centers on the normative and hedonic goals. It is assumed that the gain goal has a minor influence on hotel guests' in-room water conservation behavior because people pursue this goal to improve their resources (e.g.by saving money or increasing income or status). However, environmentally responsible behavior by guests in hotel rooms is considered a form of

prosocial behavior (Steg & De Groot, 2010). This form of prosocial behavior benefits others (e.g. society and hotel managers) but does not provide direct individual benefits. This situation differs from household settings because people at home may be motivated by the gain goal to save water and thus reduce the water bill. This scenario highlights the difficulty of motivating tourists to behave pro-environmentally in the hotel context (Juvan & Dolnicar, 2014).

2.2.1. Personal normative motives: The norm activation process

Personal normative motives consist of several cognitive factors. Through a normative process, these factors generate personal norms as the output that individuals tend to pursue (Schwartz & Howard, 1981). Accordingly, personal norms are activated by four key variables: (1) ascription of responsibility, (2) outcome efficacy, (3) self-efficacy or ability, and (4) problem awareness. Together, these four variables form the basis of the norm activation model (NAM; Schwartz & Howard, 1981). The NAM describes the links between activators, personal norms, and intentions or behavior (see Figure 1). It has been a mainstay in explaining why people engage in pro-environmental actions in general (e.g. Onwezen, Antonides, & Bartels, 2013; Schultz et al., 2005) and travelers' pro-environmental behavior in particular (e.g. Han, Yu, Koo, & Kim, 2019; Li & Wu, 2019). However, for the specific case of guests' in-room water conservation behavior, no previous studies appear to have applied the NAM model (Schwartz & Howard, 1981). The few studies that have analyzed some activities related to in-room water conservation activities (e.g. Kiatkawsin & Han, 2017) have applied the value-belief-norm theory (Stern, 2000), which is an extension of the NAM.

The concept of a personal norm (also known as a moral obligation or moral norm) is understood as 'feelings of moral obligation to perform or refrain from specific actions' (Schwartz & Howard, 1981, p. 191). An individual's personal norm is associated with a personal belief regarding what is right according to positive self-evaluation. This morality affects prosocial decision making or behavior (Fransso & Biel, 1997). According to Juvan and Dolnicar (2017), personal norms, unlike attitudes, remain relatively stable over time. Thus, they might represent a more suitable target for encouraging pro-environmental behavior in different settings (e.g. home vs. hotel). Accordingly, many empirical studies have shown a positive relationship between personal norms to perform eco-friendly behaviors when traveling and water conservation intentions (e.g. Han & Hyun, 2018a; Kiatkawsin & Han, 2017). Based on this argument, the following hypothesis is proposed:

H1: Hotel guests' personal norms regarding responsible water use when staying at a hotel are positively related to in-room water conservation behavior.

Regarding the key variables that activate personal norms (see Figure 1), past studies have rarely considered all the variables proposed in the original NAM framework. In particular, self-efficacy (i.e. one's ability to mitigate environmental threats) is typically omitted because it is considered relevant only to explain behaviors requiring high levels of ability (Steg & De Groot, 2010). Consequently, this variable is also omitted in this research. Outcome efficacy (i.e. the belief that one's actions will be effective at reducing environmental problems) has also been neglected in most pro-environmental studies (e.g. Li & Wu, 2019). However, outcome efficacy is particularly important in regard to problems that people perceive can only be solved when many individuals cooperate. Accordingly, outcome efficacy plays a prominent role in environmental problems because these problems are related to collective actions (Steg & De Groot, 2010). In such scenarios, it is likely that feelings of moral obligation and prosocial intentions or behaviors will develop only if people believe that their contribution will matter and that others will also contribute (Steg & De Groot, 2010). For example, marketing scholars have cited outcome efficacy, which is commonly referred to as 'perceived customer effectiveness' in the marketing literature, as a critical factor at every stage of the decision-making process of ecological consumer behavior (Straughan & Roberts, 1999).

In the context of in-room water conservation behavior by hotel guests, outcome efficacy might be particularly important for two reasons. First, guests may perceive that their contribution to overall water saving by the hotel is small because their individual in-room water consumption is low compared to the water consumption in other hotel areas (e.g. kitchen and garden irrigation) and compared to the total in-room water consumption of all guests. Second, guests may also perceive that their contribution is insignificant because their stay at the hotel is short (a matter of days). They may therefore conclude that their water saving behavior will make little difference. Despite the potential importance of this variable in the hotel context, no scholars have included it in their models (e.g. Han & Hwang, 2017; Kiatkawsin & Han, 2017). Given the scant literature on sustainable tourism and guests' outcome efficacy and drawing on the above ideas, the following hypothesis is proposed:

H2: Hotel guests' outcome efficacy is positively related to these guests' personal norms regarding responsible water use when staying at a hotel.

On the contrary, ascription of responsibility (i.e. feelings of responsibility for the negative consequences of not acting prosocially) has been widely used in studies in the hotel context to explain different pro-environmental behaviors (e.g. Choi, Jang, & Kandampully, 2015). There is ample evidence that individual personal ecological norms are activated when people ascribe some responsibility to themselves for detrimental consequences. Given this argument, the following hypothesis may be formulated:

H3: Hotel guests' ascribed responsibility is positively related to these guests' personal norms regarding responsible water use when staying at a hotel.

Another important concept in the NAM is problem awareness. Problem awareness is defined as 'people's understanding that their actions might have consequences for the welfare of others' (Milfont, Sibley, & Duckitt, 2010, p. 124). Tourists' perceptions of the consequences of water consumption when staying in a tourist destination are crucial because the average tourist in Europe consumes twice as much water per day as the average European resident (Gössling et al., 2012). Furthermore, hotels consume a tremendous amount of water in daily activities (swimming, spa facilities, laundry, etc), and this consumption causes considerable environmental damage (Untaru et al., 2016). Research has shown that individuals should first be aware of environmental problems caused by water consumption and that greater problem awareness increases the extent to which people think they can successfully contribute to solving these environmental problems (Landon, Kyle, & Kaiser, 2017). This outcome efficacy in turn activates personal norms to reduce water use (see Figure 1). Likewise, previous empirical studies (e.g. Kiatkawsin & Han, 2017) have cited problem awareness as an antecedent of ascribed responsibility to reduce a threat and personal norms as an immediate antecedent of environmental behavior (see Figure 1). Therefore, it is unlikely that guests will feel responsible to act prosocially (ascribed responsibility) or think about the effectiveness of possible actions (outcome efficacy) if they do not view failing to act prosocially as a problem (problem awareness). Accordingly, the following hypotheses are proposed:

H4a: Hotel guests' general problem awareness is positively related to these guests' perceived outcome efficacy of performing water conservation behaviors during a hotel stay.

H4b: Hotel guests' general problem awareness is positively related to these guests' ascription of responsibility to reduce water problems caused by the hotel industry.

Furthermore, research indicates that many other facets may also influence problem awareness and pro-environmental behavior. Examples are the time frame, generality versus specificity, and the geographical scale of environmental issues (Milfont et al., 2010). Regarding the latter, research suggests that people perceive the consequences of problems differently depending on whether they are global or local problems (Milfont et al., 2010; Schultz et al., 2005). Individuals usually seem more concerned about global environmental problems than problems at a local level (Milfont et al., 2010). For example, Schultz et al. (2005) examined the effect of the geographical scale on the applicability of the NAM to pro-environmental behavior in six countries. They measured problem awareness at two levels: (1) the global or general level, where they were asked to rate the same environmental problems worldwide, and (2) the local level, where participants were asked to rate the seriousness of different environmental problems (e.g. deforestation and water pollution) in their community. They found that these two distinct geographical scales of environmental problems differed in terms of activating value bases for environmental concern necessary for action. Whereas global geographical conditions activated values (self-transcendence values) that led to different pro-environmental behaviors, local conditions did not. Schultz et al. (2005) explained this result by suggesting that the severity of local environmental problems might not have reached a sufficiently harmful level to activate values leading to responsible behavior. Following this idea, there might be perceptual differences depending on whether the consequences of water consumption by tourists are analyzed in general or for a specific destination. It is thus necessary to consider both geographic levels.

This differentiated analysis is of particular relevance to the present study because tourists visiting a city for a brief time may have limited knowledge about water-related problems in the destination and the consequences at the local level or may attach even less importance to this issue than they would in their own community. Indeed, some authors (e.g. Miao & Wei, 2016) have suggested that because tourism activities are transitory in nature, tourists' sense of responsibility is susceptible to temporary suspension. This transitory nature of tourism can reduce the influence of local problem awareness on perceived effectiveness of behavior (outcome efficacy) and on tourists' water conservation responsibility (ascription of responsibility) to a greater extent than that to which it reduces the influence of general problem awareness (see Figure 1). Based on these arguments, the following hypotheses are proposed:

H5a: Hotel guests' local problem awareness is positively related to these guests' perceived outcome efficacy of performing water conservation behaviors during a hotel stay.

H5b: Hotel guests' local problem awareness is positively related to these guests' ascription of responsibility to reduce water problems caused by the hotel industry.

2.2.2. Hedonic motives

Although normative motives can play an important role in responsible behavior, tourism, especially in sun, sand, sea, and leisure destinations, is inherently hedonic and is characterized by enjoyment and relaxation. The hedonic nature of this form of tourism clashes with a willingness to make sacrifices for the planet (Dolnicar, Knezevic-Cvelbar, & Grün, 2019). Many pro-environmental behaviors require individuals to curb their egoistic tendencies to benefit the environment (Lindenberg & Steg, 2007). However, in the hotel context, the hedonic motivation to feel better right now through personal comfort, direct pleasure, or excitement may inhibit pro-environmental behavior when people perceive such behavior as not pleasurable (Lindenberg & Steg, 2007; Miao & Wei, 2016). As Miao and Wei (2013, 2016) affirm, conventional hotels are not seen by consumers as being oriented toward sustainability. They suggest that pro-environmental behavior in a hotel setting is contingent on factors such as personal comfort, convenience, and cost. These hedonic motives are based on hedonic values, whose overriding focus is on feeling good and making as little effort as possible (Steg et al., 2014). Because customers rarely have tangible monetary incentives or normative obligations to behave pro-environmentally during a hotel stay, other tangible benefits such as enjoyment, pleasure, and convenience are important factors in influencing this responsible behavior (Miao & Wei, 2016; Wang et al., 2018). Accordingly, Miao and Wei (2016) found that the likelihood that an individual behaves pro-environmentally in a hotel is primarily a negative function of motives such as personal comfort and enjoyment. The following hypothesis may therefore be proposed:

H6: Hedonic motives are negatively related to in-room water conservation behavior.

2.3. The moderating role of personal norms

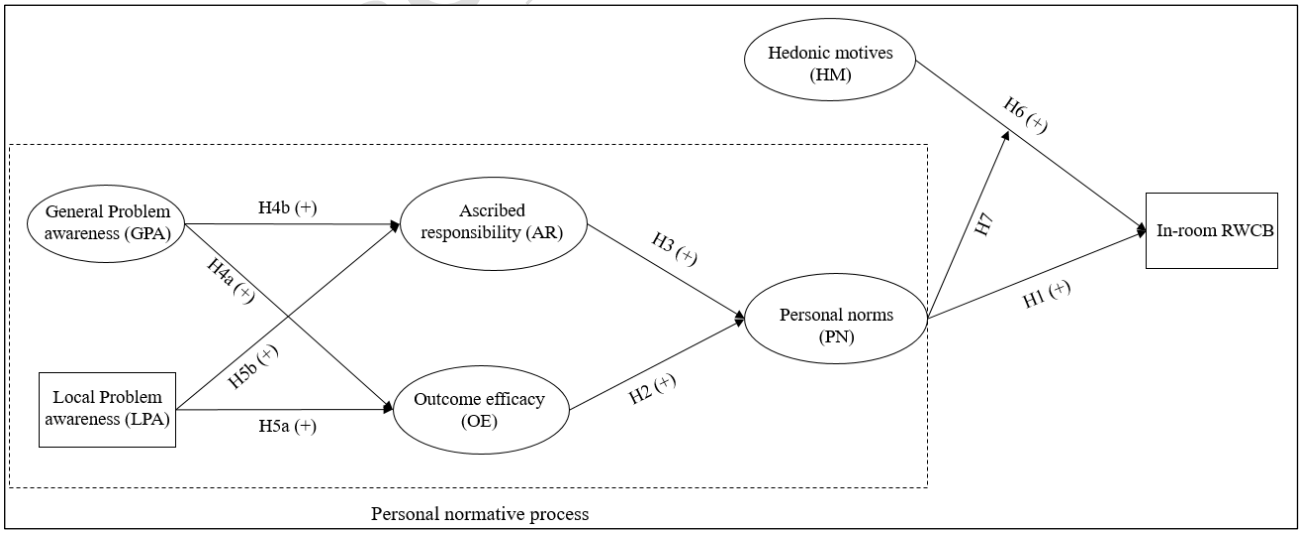
According to the goal-framing theory (Lindenberg & Steg, 2007) hedonic motives are, a priori, the strongest motivation to act because they are related to satisfying needs, which is the most basic motive. However, goal-framing theory also suggests that there

are often multiple conflicting motives in environmental behavior. Thus, although the natural tendency is to seek pleasure and satisfaction, personal norms can lead to responsible behavior even if it involves effort or less personal comfort. For instance, a guest might initially think of having a relaxing bath at the end of the day to enjoy the moment. However, the guest may decide not to do so because of a moral conviction not to waste water. This personal norm overrides the first hedonic thought. This process might be explained by cognitive dissonance theory, which describes what happens when a lack of alignment between people's cognitions and behaviors leads to tension (Festinger, 1957). If individuals have strong personal norms regarding responsible water use at a hotel, this norm is incorporated into their belief system (Landon et al., 2017). Failure to conform to a personal norm elicits the negative feelings associated with a guilty conscience as a form of self-punishment (Kerr, 1995), and people adapt their behaviors to relieve this tension. Accordingly, personal norms may moderate the relationship between hedonic motives and guests' water conservation behavior. That is, the negative association between hedonic motives and water conservation behavior may be reduced to a varying degree depending on the level of personal norms. Following this idea, the last hypothesis is formulated:

H7: The stronger the hotel guests' personal norms are regarding responsible water use, the weaker the relationship between hedonic motives and behavior will be.

The hypotheses of this theoretical framework are summarized in Figure 1.

Fig. 1. Proposed theoretical model of guests' reported in-room water conservation behavior



3. Method

3.1 The focal tourist destination: Benidorm (Spain)

Benidorm is one of the most important tourist destinations in the Mediterranean region (Ivars-Baidal, Sánchez, & Rebollo, 2013). It is the fourth biggest destination in Spain in terms of its tourism index (defined in the report by La Caixa, 2016), behind only Madrid, Barcelona, and the Canary Islands. Benidorm received more than 11 million tourists in 2018 (INE, 2019a) and had an average occupancy rate of approximately 84% (Rico-Amoros, Olcina-Cantos, & Saurí-Pujol, 2009). Regarding its visitor profile, Benidorm is a well-known tourist destination both in Spain and internationally. It offers beach and other leisure facilities that have historically been marketed by tour operators (Ivars-Baidal et al., 2013). Accordingly, the tourist profile in terms of country of residence is diverse, although it has a very large British contingent. The average length of stay at hotels is 5.6 days (INE, 2019a), and tourists are highly loyal to the destination and the hotel where they stay (Sánchez-Galiano, Martí-Ciriquián, & Fernández-Aracil, 2017).

Benidorm is ideal for studies of water use or conservation because it is geared toward sun, sand, and sea mass tourism and is located in an area of water scarcity. This characteristic places extra pressure on water demand from tourism (Casares-Blanco, Fernández-Aracil, & Ortuño-Padilla, 2019). Furthermore, the urban layout of Benidorm means that buildings and people are heavily concentrated in a small area (see Figure 2). Its high density of skyscrapers for both residential and hotel use is a result of its strategic urban policy since the 1960s (Ivars-Baidal et al., 2013).

Fig. 2. Images of Benidorm

Demographically, Benidorm has around 67,000 officially registered inhabitants (INE, 2019b). However, massive flows of tourists and the seasonality of this type of tourism increase its temporary population. Accordingly, Benidorm has more than 102,000 water consumers per day in summer (see Sánchez-Galiano et al., 2017). Regarding water use in hotels, Table 1 briefly shows the main indicators of the supply of hotel accommodation and water consumption in Benidorm by type of hotel.

Table 1.
Hotel accommodation supply and water consumption in Benidorm by type of hotel

Category	Number	%	Rooms	%	Beds/places	%	Avg. water consumption*	Variation in water consumption (2005–2014)
5 stars	4	3.1%	542	2.6%	1092	2.7%	275	+97.5
4 stars	40	30.5%	8184	39.0%	16,284	39.6%	262	+37.0
3 stars	58	44.3%	10,198	48.6%	19,748	48.1%	200	-61.0
2 stars	23	17.6%	1897	9.0%	3619	8.8%	N.A.	N.A.
1 star	6	4.6%	184	0.9%	353	0.9%	N.A.	N.A.
Total	131		21,005		41,096			

Note: Compiled by the authors based on data from the Valencian Tourism Agency (Agencia Valenciana de Turismo, 2018). N.A. = not available. * Average water consumption in liters per guest per day in 2014 (source: Rico et al., 2019)

Mid-range hotels (3 stars) are most numerous (44.3%), followed by mid-to-high-end hotels (4 stars; 30.5%). Although both public and private institutions have made major investments in Benidorm to improve water use efficiency in recent years (Ivars-Baidal et al., 2013), only mid-range hotels (3 stars) have significantly reduced their daily water consumption per guest. However, water consumption by mid-to-high- and high-end hotels (4 and 5 stars) has risen, primarily due to the increase in the number of amenities and outdoor facilities (Rico et al., 2019). Therefore, identifying which factors influence guests' water conservation behavior in this type of hotel is particularly useful for the purposes of reducing water use in this arid coastal destination.

3.2. Data collection and sample characteristics

The data were gathered using a face-to-face survey. Computer-assisted personal interviewing (CAPI) was performed with Qualtrics software. The data collection was carried out by an external market research institute. Tourists were approached in the hotel during their visit to Benidorm to ensure that they were actual guests and that their responses were specifically related to the focal destination. Quotas were defined in the sample design using the key tourism variables of age, gender, and country of origin, based on previous information on incoming tourists to Benidorm (GVA, 2016). All interviewers received detailed training on the specific questionnaire to reduce tourists' reluctance to answer, improve response quality, and avoid the bias traditionally associated with this method in the field of sustainability and tourism (Dahlgren & Hansen, 2015). The

fieldwork was performed between July and August 2019 (peak summer season) in Benidorm (Spain) in six 4-star tourism-oriented hotels of a mid-sized hotel chain.

As a screening condition, only guests that had already stayed at least three nights at the hotel remained in the final sample. The average total number of nights spent at the hotel by tourists in the sample was 8.3. On average, the questionnaire was completed on the fifth day of the stay. Participants took approximately 8 minutes on average to complete the survey. From the initial sample of 758 responses, atypical cases, repeat responses, and incomplete questionnaires were removed, giving a total of 681 cases (see Table 2).

Table 2.
Sample profile (n = 681)

Criteria	Levels	n	(%)
Gender	Female	337	49.5
	Male	343	50.5
Age	18–29	66	9.7
	30–44	118	17.3
	45–65	317	46.5
	66 or more	175	25.7
Education	No studies	44	6.5
	Primary education	96	14.1
	Secondary education	324	47.6
	University/college	215	31.6
Income (net monthly)	No income	36	5.3
	€300 or less	2	0.3
	€301–€600	5	0.7
	€601–€900	14	2.1
	€901–€1200	48	7.0
	€1201–€1800	176	25.8
	€1801–€2400	240	35.2
	€2401–€3000	107	15.7
	€3001–€4500	28	4.1
	€4501 or more	20	2.9
Country of residence	Spain	303	44.5
	UK	256	37.6
	Other	67	9.8
	Ireland	33	4.8
	Germany	14	2.1
	Russia	6	0.9
	France	2	0.3

3.3. Measures

In light of the recommendations in the environmental psychology literature (e.g. Steg & De Groot, 2010), the measurement scales used to operationalize the variables in the model were at the behavior-specific level (related to water consumption or conservation). Furthermore, the order of the questions on the questionnaire was designed not to reveal the purpose of the study earlier than necessary to avoid social desirability

bias, which is a common problem in studies of sustainable tourism (Juvan & Dolnicar, 2017). The questionnaire was pretested by experts in tourism marketing and sustainability and by an initial sample of tourists under the same conditions as the final sample.

Concerning the antecedents to reported water conservation behavior, measures were selected and adapted from the literature to measure hedonic motives and the variables involved in the norm activation process: personal norms, ascribed responsibility, outcome efficacy, and general problem awareness. These constructs were measured using multi-item measurement scales, and respondents were asked to indicate their agreement on a scale ranging from 1 (strongly disagree) to 7 (strongly agree). This information appears in Table 3. Local problem awareness, however, was measured using a single item to consider individuals' awareness of the consequences of tourism in the specific tourist destination. It was measured by responses to the following statement: 'I perceive that tourist water consumption is a serious problem for the city of Benidorm' on a scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Finally, reported in-room water conservation behavior was measured using the arithmetic mean (aggregate index) of nine items derived from the literature (Gabarda-Mallorquí, Fraguell, & Ribas, 2018; Miao & Wei, 2013, 2016). Responses ranged from 1 (never) to 7 (all the time) for the nine statements related to in-room water conservation behaviors: 'I've turned off the tap while brushing my teeth,' 'I've let the water run until it was the right temperature' [reverse coded], 'I've had a shower more than once a day' [reverse coded], 'I've turned off the shower while lathering up', 'I've had a long shower when a shorter one would do' [reverse coded], 'I've flushed the toilet every time I've used it' [reverse coded], 'I've chosen between the small and large buttons when flushing the toilet', 'I've used the same towel(s) more than one day,' and 'I've used the same bed sheets more than one day.' To overcome the limitation of self-reported pro-environmental behavior measures, the recommendations by Kormos and Gifford (2014) were followed. Specific items linked to the actual water behavior by guests in the hotel room where they were staying were used. This approach was followed instead of asking about generic pro-environmental behavior. Furthermore, social desirability bias was controlled for by response anonymity because each interviewee self-administered the questionnaire using a tablet. Table 4 shows the key descriptive statistics of the variables in the model.

Table 3.
Reliability and convergent validity

Construct & items	Std. Load	Robust t	CRI	AVE
PERSONAL NORMS (Gatersleben et al., 2014; Han & Huyn, 2018b)				
PN1: I feel guilty when I use a lot of water on holiday.	.73	28.35**		
PN2: I feel obliged to do things to save water (e.g. reusing towels) when I stay at a hotel.	.61	21.64**	.76	.52
PN3: Because of my own values/principles, I feel that I should use water responsibly when I stay at a hotel, regardless of what other people do.	.79	37.20**		
GENERAL PROBLEM AWARENESS (Bolderdijk et al., 2013; Han, Kim, & Lee, 2018)				
GPA1: The tourism industry can cause natural resources such as water to run out.	.67	22.45**		
GPA2: I am concerned about the amount of water that the hotel industry consumes.	.85	42.24**	.82	.60
GPA3: The environmental damage to water (scarcity, pollution, etc) caused by tourism is very serious.	.80	32.424**		
ASCRIBED RESPONSIBILITY (Landon, Woosnam, & Boley, 2018)				
AR1: As a hotel guest, I feel partly responsible for the water problems caused by the hotel industry.	.88	55.17**		
AR2: I feel jointly responsible for the water problems caused by the hotel industry.	.86	48.65**	.82	.61
AR3: It is my responsibility to minimize my impact as a tourist on the environment.	.57	17.02**		
OUTCOME EFFICACY (Han & Yoon, 2015)				
OE1: It is pointless for an individual guest to do anything to save water during his/her stay [reverse coded].	.81	32.91**		
OE2: Since one guest has no effect on the hotel industry's water problems, it makes no difference what I do [reverse coded].	.81	32.23**	.75	.51
OE3: A guest's behavior can have a positive effect on society if that guest saves water during his/her stay.	.50	12.84**		
HEDONIC MOTIVES (Miao & Wei, 2013, 2016)				
HM1: It's too much effort to save water during my stay.	.91	62.84**		
HM2: The amount of effort required makes it inconvenient to do things to save water.	.91	65.56**		
HM3: I have too many other things to do (during my trip) to think about saving water.	.86	60.72**		
HM4: Saving water during my stay is more effort than it's worth.	.82	44.59**	.94	.69
HM5: My own comfort is more important to me.	.77	37.63**		
HM6: Because of the amount of daily activity during my trip, I often forget to save water.	.79	39.53**		
HM7: My lifestyle (the quality of my hotel experience) would change for the worse if I focused on saving water.	.74	35.90**		
S-B $\chi 2$ (142 df) = 608.341 ($p < .01$), BBNFI = .915, BBNNFI = .920, CFI = .934, IFI = .934, RMSEA = .071 (.065, .077)				

CRI = composite reliability index; AVE = average variance extracted. **p < 0.01; *p < 0.05.

Table 4.
Mean, standard deviation, and Pearson's correlation of the variables used in the study

	General problem awareness (GPA)	Local problem awareness (LPA)	Ascribed responsibility (AR)	Outcome efficacy (OE)	Personal norms (PN)	Hedonic motives (HM)	Reported water conservation behavior (RWCB)
GPA	-	.20**	.50**	.16**	.31**	-0.33**	.33**
LPA		-	.17**	.08*	.22**	-0.20**	.13**
AR			-	.18**	.48**	-0.18**	.23**
OE				-	.39**	-0.45**	.29**
PN					-	-0.34**	.31**
HM						-	-0.61**
RWCB							-
Range	1-7	1-7	1-7	1-7	1-7	1-7	1.78-6.78
Mean	5.10	3.23	4.80	5.28	4.44	3.63	3.99
SD	1.21	1.94	1.24	1.23	1.30	1.45	0.82

Note: n = 679 individuals. Aggregated variables are calculated using the arithmetic mean of the items of each factor. **p < .01; *p < .05.

3.4. Data analysis

Data were analyzed using IBM-SPSS v26 and EQS 6.2. Following Anderson and Gerbing (1988), a two-step estimation procedure was performed to estimate the proposed model. First, the measurement model was estimated, and reliability and validity were assessed with confirmatory factor analysis (CFA). Second, structural equation modeling (SEM) was used to estimate the structural model and to test the proposed hypotheses. Additionally, although the study was designed to minimize the potential sources of common method bias by following the recommendations of Podsakoff, MacKenzie, Lee, and Podsakoff (2003), there could still be bias arising from the fact that the data were gathered from a single survey. Therefore, common method bias was statistically assessed using the procedure proposed by Bagozzi, Yi, and Phillips (1991). This procedure required the estimation of four models using the variables included in the study to assess the variance due to trait (factors), method (single survey), and errors.

4. Results

4.1. Measure validation

CFA with robust maximum likelihood was used to confirm the dimensional structure of the scales and to assess their convergent validity. Overall, the model showed acceptable fit (see Table 3). Convergent validity was tested using Jöreskog and Sörbom's (1993) criteria. First, the item's factor loadings were examined to confirm their statistical significance (weak convergence criterion). Second, the results were inspected to determine whether they were greater than 0.5 (strong convergence criterion). All items satisfied both criteria. Therefore, no item was eliminated. Third, convergent validity was also confirmed because the average variance extracted (AVE) was greater than 0.5 for all factors (Fornell & Larcker, 1981; Table 3). Finally, construct reliability was ensured because all composite reliability values exceeded the minimum recommended level of 0.65 (Steenkamp & Geyskens, 2006). The discriminant validity analysis was based on two procedures. The first was to check that none of the 95% confidence intervals of the correlations between each pair of factors included unity (Anderson & Gerbing, 1988; Table 5). The second procedure was to ensure that all average variance extracted (AVE) scores were greater than the squared between-construct correlations (Wiertz & de Ruyter, 2007).

Table 5.
Discriminant validity

	GPA	AR	OE	PN	HM
GPA	**.60**	.51	.15	.32	.31
AR	[0.66 ; 0.77]	**.61**	.25	.57	.15
OE	[0.33 ; 0.44]	[0.44 ; 0.53]	**.51**	.46	.35
PN	[0.52 ; 0.61]	[0.70 ; 0.81]	[0.62 ; 0.73]	**.51**	.44
HM	[-0.61 ;-0.50]	[-0.44; -0.37]	[-0.64;-0.54]	[- 0.71; -0.61]	**.69**

The diagonal represents the average variance extracted. The shared variances (squared correlations) are shown above the diagonal. The 95% confidence intervals for the estimated factor correlations are shown below the diagonal.

4.2. Common method variance

To assess common method variance, four CFA models were estimated (see Table 6): (1) a null model in which variance in measures is explained only by random error, (2) a trait-only model in which variance in measures is explained by traits (factors) and random error, (3) a method-only model in which variance in measures is explained by method (survey) and random error, and (4) a trait-method model in which trait, method, factor and random error are combined to explain any variance in measures. The null model was therefore nested in both the method-only and trait-only models. The method-only and trait-only models were nested in the trait-method model (Bagozzi et al., 1991).

Table 6.
Summary of nested CFA tests for trait and method effects

	$\chi2$	d.f.	p	Model comparison	$\chi2$ difference	d.f.	p
Null (1)	45,109.93	861	< 0.001	(1)-(2)	44,393.27	719	< 0.001
Trait-only (2)	716.66	142	< 0.001	(3)-(4)	2375.11	34	< 0.001
Method-only (3)	2780.18	152	< 0.001	(1)-(3)	42,329.75	709	< 0.001
Trait-method (4)	405.07	118	< 0.001	(2)-(4)	311.59	24	< 0.001

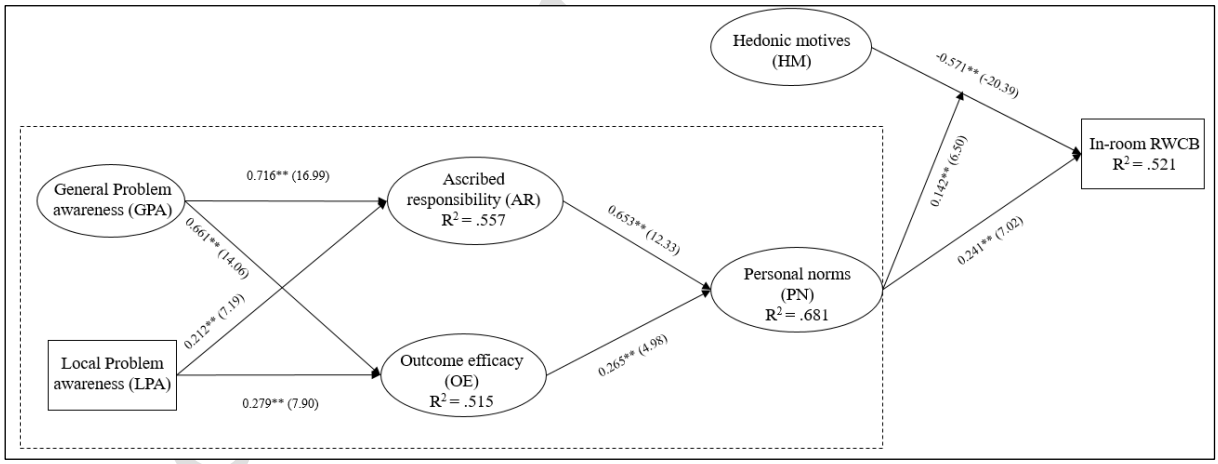
The results in Table 6 show that Models 2 and 4 have significantly better fit than Models 1 and 3, respectively. Therefore, variance due to traits (factors) appears to be present (Bagozzi et al., 1991). Nevertheless, it may be assumed that some portion of the variance is explained by the method because Models 3 and 4 have significantly better fit than Models 1 and 2, respectively (Bagozzi et al., 1991). Model fit considerably improves when trait variance (factor structure) is considered. In this case, the estimation of Model 4 (trait and method model) shows that the method-only model accounts for 21.4% of the variance, with trait factors being the main source of variance (60.9%).

4.3. Assessment of the proposed model and hypothesis testing

SEM (with maximum likelihood estimation) was used to estimate the proposed model. The overall fit indicators suggest a suitable fit between the model and the data (see Figure 3). The moderating role hypothesized in H7 was tested by applying the

orthogonalizing technique proposed by Little, Bovaird, and Widaman (2006). This approach ensures that the product indicators of the interaction term are uncorrelated with the corresponding main effect indicators. It also ensures that the model fit is not penalized when the latent interaction construct is included in the research model (Little et al., 2007). This technique requires several steps to be taken. First, all possible products of the indicators of the two interacting constructs were calculated (Little et al., 2007). There were three indicators in the personal norms construct and nine indicators in the hedonic motives construct. Therefore, 18 total product variables were calculated. Second, each of the 18 product indicators was regressed onto the indicators of both personal norms and hedonic motives (using IBM-SPSS) to remove any main effect information contained in any of the indicators of either construct (Little et al., 2007). Finally, for each regression, the prediction residuals were saved and used as the new orthogonalized indicators to be included in the SEM model as the indicators of the latent interaction construct (Little et al., 2007).

Fig. 3.
Structural model estimation



**p < 0.01; *p < 0.05. S-B $\chi 2$ [809 df] = 2,744.71 (p < .01), BBNFI = .899, BBNNFI = .922, CFI = .927, IFI = .927, RMSEA = .062, CI 95% RMSEA = [.060, .064].

The seven proposed factors explain 52.1% of the variance of guests' in-room water conservation behavior (see Figure 3). The analysis of the main antecedents of guests' reported water conservation behavior yields interesting results. Unsurprisingly, hedonic motives are negatively and significantly related to reported water conservation behavior (β = -0.571, p < .01), whereas personal norms are positively and significantly related to such behavior (β = .241, p < .01). These results support H1 and H6. Comparison of the two coefficients shows that the negative association of hedonic motives with reported water conservation behavior is more than twice as strong as the association of personal

norms with such behavior. The moderating role of personal norms in the relationship between hedonic motives and reported water conservation behavior is significant and positive ($\beta = .142$, $p < .01$), thus supporting H7. Therefore, when guests' personal norms regarding water conservation are stronger, the (negative) relationship between hedonic motives and reported water conservation behavior is weaker. Regarding the rest of the variables from the NAM model, the results indicate that general problem awareness is positively and significantly associated with both outcome efficacy ($\beta = .661$, $p < .01$) and ascribed responsibility ($\beta = .716$, $p < .01$). Likewise, local problem awareness is related to greater outcome efficacy ($\beta = .279$, $p < .01$) and ascribed responsibility ($\beta = .212$, $p < .01$). These results support H4a, H4b, H5a, and H5b. The comparison of these coefficients suggests that the relative importance of general problem awareness is greater than local problem awareness of the specific destination (i.e. Benidorm). Finally, both outcome efficacy ($\beta = .265$, $p < .01$) and ascribed responsibility ($\beta = .653$, $p < .01$) are positively and significantly related to guests' personal norms regarding responsible water use when staying at a hotel. These results support H2 and H3, respectively.

4.4. Test of mediation for the proposed relationships

The structure of the proposed model suggests that several relationships between variables are fully mediated by other variables in the model. For example, the relationship between general problem awareness (GPA) and personal norms is assumed to be fully mediated by ascribed responsibility and outcome efficacy (as proposed in the general NAM model). We formally tested these mediation assumptions following the procedure of Bagozzi and Dholakia (2006). We sequentially compared the baseline model (see Figure 3) to six models to which direct paths from the mediated variables had been added (see Table 7). Table 7 shows the results for the formal tests of mediation. The differences in χ^2 values between the baseline model and the partially mediated models (χ^2_d) are non-significant at the 95% confidence level. Thus, all mediations in the proposed model are fully mediated, as hypothesized.

Table 7.
Mediation analysis for the proposed model

Model	Goodness of fit	Hypothesis test	Mediation type
1. Baseline model: Hypothesized paths (Fig. 1)	$\chi 2$ [809] = 4115.29, p < .01 RMSEA = .062 CI 95% RMSEA = [.060, .064] BBNNFI = .922; CFI = .927	-	
2. General problem awareness --> In-room RWCB	$\chi 2$ [808] = 4113.17	M_1-M_2: χ^2_d [1] = 2.12, p > 0.14	Fully mediated
3. Local problem awareness --> In-room RWCB	$\chi 2$ [808] = 4115.11	M_1-M_3: χ^2_d [1] = 0,18, p > 0.68	Fully mediated
4. General problem awareness --> Personal norms	$\chi 2$ [808] = 4113.78	M_1-M_4: χ^2_d [1] = 1.51, p > 0.22	Fully mediated
5. Local problem awareness --> Personal norms	$\chi 2$ [808] = 4113.97	M_1-M_5: χ^2_d [1] = 1.32, p > 0.25	Fully mediated
6. Ascribed responsibility --> In-room RWCB	$\chi 2$ [808] = 4112.97	M_1-M_6: χ^2_d [1] = 2.32, p > 0.12	Fully mediated
7. Outcome efficacy --> In-room RWCB	$\chi 2$ [808] = 4111.82	M_1-M_6: χ^2_d [1] = 3.47, p > 0.05	Fully mediated

5. Discussion and conclusions

Identifying the key psychological drivers of water use and conservation is the only way that effective strategies (e.g. water policies, communication campaigns, and social marketing programs) can be developed to address issues with water demand management (Han, Kim & Lee, 2018; Miao & Wei, 2016). This study therefore examined the motives for guests' water conservation behaviors in Benidorm. This destination offered an excellent example of a Mediterranean holiday resort that has traditionally suffered from water scarcity and drought (Martínez-Ibarra, 2015).

Overall, the findings show that hedonic motives (affective determinants) play a more important role in water conservation behavior than normative motives (cognitive determinants). Like the research by Miao and Wei (2013, 2016), this study shows that customers' desires for personal comfort and convenience are the strongest predictors of in-room responsible water behavior. Accordingly, the desire for personal comfort and the feeling that saving water requires an effort that may worsen the quality of the experience seem to be major barriers to conserving water in hotel rooms. Although personal norms enhance responsible behavior by guests during their stay, the perception that this behavior reduces pleasure and comfort (i.e. hedonic motives) inhibits in-room water conservation behavior to an extent that outweighs the enhancing influence of personal norms. This

finding is consistent with those of previous studies (e.g. Lindenberg & Steg, 2007; Steg et al., 2014), which suggest that people have multiple motives for acting a certain way, and these motives may (or may not) be compatible with each other. Personal norms are considered primary motives—or 'the larger motives that let us engage in a whole set of behaviors, e.g. striving to live an environmental lifestyle' (Kollmuss & Agyeman, 2002, p. 250). In contrast, hedonic motives are seen as selective motives—or the motives that influence one specific action. These hedonic motives are non-environmental motives that emerge from the situational context of behavior (Miao & Wei, 2013). Like the research by Miao and Wei (2013, 2016), this study suggests that in a hotel setting, primary motives (personal norms) may be overridden by selective motives (hedonic motives). In a holiday context, these hedonic motives seem to be more salient than moral motives, probably because they are more visceral and involve people's desire to feel comfortable (Lindenberg & Steg, 2007). For example, if guests with a focal hedonic motive believe that reusing bath towels will reduce their level of personal comfort, they may be unwilling to perform this kind of water conservation behavior.

The results of this study also show that personal norms may reduce the negative influence of hedonic motives on responsible water behavior. Although personal comfort is the most salient consideration when guests consume water in their rooms, if they have strong personal norms, they will use water more responsibly. This moderating effect of personal norms on the relationship between hedonic motives and water conservation behavior suggests that individuals must act consistently with their moral obligation, even if they are in a context of pleasure and even if it involves effort and a loss of comfort (Festinger, 1957). This finding supports the idea described by goal-framing theory (Lindenberg & Steg, 2007), whereby for a given situation, one goal is focal and has a predominant influence on decision making, while the other goals act in the background to strengthen or weaken the focal goal. Hedonic motives are the focal goal in the present study, so this goal has the strongest influence on decision making (in-room water conservation behavior). However, the normative goal also acts in the background to weaken this focal goal (i.e. there is conflict with the goal frame; Steg et al., 2014).

Regarding the personal normative process through the application of the NAM model in this study, all of the variables (i.e. outcome of efficacy, ascription of responsibility and general/local problem awareness) have high explanatory power. Furthermore, all proposed relationships are supported by the data. More specifically, the model shows that including some previously neglected variables of the former NAM

model (Schwartz & Howard, 1981), such as outcome efficacy regarding water conservation activities, provides a better understanding of guests' in-room water conservation behavior. Past studies based on the NAM model have considered only the ascription of responsibility as an antecedent of personal norms (e.g. Han & Hwang, 2017; Kiatkawsin & Han, 2017) or have confused this variable with outcome efficacy. Thus, although some authors (e.g. Bamberg & Schmidt, 2003) have conceptualized ascription of responsibility using its original definition (i.e. feelings of responsibility for the negative consequences of not acting prosocially), others have assessed the extent to which an individual can contribute to effective solutions and thus outcome efficacy (e.g. Stern et al., 1999). However, the two constructs should be distinguished (Steg & De Groot, 2010). Although people may feel responsible for a particular problem (high ascription of responsibility), they may nonetheless perceive that their behavior does not contribute meaningfully to solving that problem (low outcome efficacy) because collective cooperation is needed. The present study confirms this idea. Finally, the results show that, on average, tourists' general problem awareness is greater than tourists' local problem awareness in Benidorm. This general problem awareness is also more important in explaining guests' water conservation behavior. This finding is of particular interest because it shows that tourists who visit Benidorm have a moderate-to-high level of awareness of water scarcity in general yet are less aware of the lack of water in this specific destination. Like previous research (e.g. Milfont et al., 2010; Schultz et al., 2005), this study shows that individuals are more concerned with global environmental problems than problems at the local level. The respondents in this study indicated that although they perceive water-related environmental problems derived from tourist activity to be serious worldwide, the effects are not yet readily apparent in the present destination.

5.1. Theoretical and managerial implications

In terms of theory, this study makes an important contribution by being one of the few studies to empirically show the superiority of hedonic motives over personal normative motives in explaining guests' in-room water conservation behavior. The study also shows the moderating role of personal norms in the relationship between hedonic motives and guests' water conservation behavior. Furthermore, the use of a sample of actual hotel guests helped capture the importance of these hedonic motives by interviewing individuals in a real consumption context (i.e. their stay at a hotel). When asked about the importance of affective factors such as personal comfort during their stay,

the tourists offered reliable responses, which reduced attribution bias with respect to recollections about past consumption because their feelings were being experienced at that very moment (Haggag, Pope, Bryant-Lees, & Bos, 2018). This study is also pioneering in that it includes outcome efficacy of water conservation activities. This variable has been neglected in the NAM model (Schwartz & Howard, 1981) in most sustainable tourism studies. The findings of this study support the idea that ascription of responsibility and outcome efficacy are two different constructs. Studies should distinguish between the two. This recommendation is particularly relevant in the hotel context, where a single guest's behavior in isolation may be perceived as insufficient to achieve a given environmental goal because individual behavior is outweighed by the behavior of the group. Finally, the current study also distinguishes between two types of problem awareness (general and local problem awareness) in the NAM model to explain hotel guests' personal norms regarding responsible water use. Despite a consensus that problem awareness influences outcome efficacy of environmental behavior and the ascribed responsibility (e.g. Steg & De Groot, 2010; Landon et al., 2017), little is known about the nature of this awareness. In this study, both general problem awareness of water use across the tourism industry and local awareness of the harmful consequences for a specific tourist destination (Benidorm) are considered. The model thus helps explain how the specific features of the destination (e.g. water scarcity in Benidorm) relate to guests' water conservation behavior.

Regarding the managerial implications, the results of this study suggest that the desire for personal comfort and the feeling that saving water involves effort are the major barriers to in-room water conservation behavior. Therefore, most interventions aimed at promoting water saving in hotel rooms should deliver a different message from the one that is being conveyed at present. Currently, these strategies center on messages designed to increase environmental knowledge (e.g. factual information about future risks) or to remind guests of their social responsibility to save the environment, instead of focusing on their personal needs and desires (Miao & Wei, 20013). The present study suggests that these programs should carefully consider the possible hedonic consequences of water consumption because they are important barriers to behavioral change. Hospitality practitioners (e.g. hotel managers) should reflect on how to make the positive hedonic aspects of in-room water conservation behavior more appealing. For instance, interventions should show that participation entails little effort and can provide benefits to guests. As a case in point, hotels could use cost savings from reducing in-room water

consumption to improve guests' experience or could even offer a discount on the room price upon checkout (e.g. Morgan & Chompreeda, 2015). However, the fact that personal norms moderate the relationship between hedonic motives and water conservation behavior suggests that hotel managers should not only rely on hedonic motives when developing interventions but should also consider normative goal messages. Interventions that solely target hedonic goals may lead people to consider it sensible and necessary to behave pro-environmentally only when it is convenient or financially attractive to do so (Thøgersen & Crompton, 2009). This situation would undermine the influence of normative goals. Consequently, people might cease to perform other demanding, inconvenient, or financially unattractive pro-environmental behaviors (Steg et al., 2014). In addition, by exclusively targeting hedonic goals, it becomes difficult to achieve stable pro-environmental motivations, and sustainable behavior becomes heavily context dependent. For example, if individuals visit another hotel where such interventions are not implemented, they may not behave pro-environmentally. Even more importantly, this strategy may actually inhibit future behaviors because if guests perceive that the hotel does not care for their welfare and comfort, they may consume more water in protest. Therefore, the proposal offered here is for interventions to address both types of goals (hedonic and normative) and to bring them into conformity. For example, the message should aim to elicit emotions such as pride or the pleasure and self-satisfaction that comes from doing the right thing (De Young, 2000). In this case, acting in accordance with environmental norms makes people feel good and thereby supports hedonic goals (Steg et al., 2014). Finally, tourists' low perceptions of water problems in Benidorm (local problem awareness) imply that public and private decision makers in Benidorm should make greater efforts to communicate water problems in this area by targeting the tourist segment.

5.2. Limitations and future research

While this study addresses major flaws in previous research, it has several limitations, which could offer potential avenues for future research. First, although the sample size (n = 681) and the distribution of responses were acceptable in this study, data were gathered from four-star tourism-oriented hotels in Benidorm only. Future research should apply this model to other types of lodging facilities (e.g. five-star hotels) and other destinations with different climates and water scarcity levels. Second, the results of this study must be interpreted with care. Causality cannot be inferred because the study is

based on cross-sectional survey data. Future longitudinal studies or experimental designs are needed to identify causal relationships between the factors that drive guests' water conservation behavior. In addition, the use of self-reported measures may have led respondents to modify their answers to exaggerate their green credentials (Kormos & Gifford, 2014). Although this form of measurement is common in behavioral research and it has been shown that self-reported behavior highly correlates actual behavior (e.g. Kormos & Gifford, 2014; Vilar, Milfont, & Sibley, 2020), the recommendation is for future studies to use more objective measures of pro-environmental behaviors. Third, this study proposes a behavioral model to explain hotel guests' in-room water conservation. Although guests have a high degree of control over water conservation through their in-room activities, out-of-room activities (golf, pools, spas, etc) in mid-to-high and high-end hotels (four- and five-star hotels) substantially increase water consumption by guests. Future models should try to expand the scope of this study by investigating out-of-room water conservation behavior by this segment of the market.

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