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Senior Spa-Goers' Potion: Brewing Post-Trip Life Satisfaction from the Essence of Motivations

Abstract

This study analyzes the effect of tourism-related life-enhancing motivations and tourism-related constraints on seniors' life satisfaction after a visit to a spa. Drawing on expectancy-value, leisure constraints, and social comparison theories, the empirical application conducted in the thermal tourism context finds that tourism-related constraints have no effect on life satisfaction and that tourism-related life-enhancing motivations present a diversity of effects. While some motivations have no effect, others exert a positive effect in absolute terms (novelty) and in relative terms (relaxation and internal motivations) following a reference dependence pattern that is in line with prospect theory. Additionally, reference-dependent motivations present asymmetric effects from different angles: relaxation behaves according to the principles of loss aversion, while internal motivations show, nonetheless, *reverse* loss aversion. Theoretical frameworks related to motivation may benefit from recognizing the diverse effects of motivations on certain dimensions, such as life satisfaction.

Keywords: senior spa-goer; motivation; constraint; life satisfaction; reference dependence; loss aversion.

1. Introduction

Senior population has been gradually increasing worldwide. Several projections suggest that by 2050, the number of people over 60 will surpass the number of people between 10 and 24 years old (Rudnicka et al., 2020). As such, the issue of aging populations has gained prominence in highly developed nations.

Furthermore, the increase in life expectancy has modified perceptions on seniors (Chaulagain et al., 2024; Chee, 2023; Jang et al., 2024). They are not seen as a heavy burden on social security and public health systems (Fuchs et al., 2013) but are instead increasingly being recognized for their social and economic potential (Foster & Walker, 2015). As a result, seniors have become a significant market for the travel industry that represents a substantial portion of the population with strong purchasing power (Lohmann & Danielsson, 2001; Shröder & Widmann, 2007). Additionally, seniors have more leisure time and fewer responsibilities than younger adults, which leads to seniors' increased travel (Gu et al., 2016). These circumstances are seen as a viable solution to tackle seasonality in the tourism and hospitality industry because this segment can travel during the off-peak season (Jang et al., 2009). The needs of this generation revolve around participation in tourism activities, which was not the case with previous generations (Alén et al., 2017).

One of the key concerns of this group is their life satisfaction. In the field of tourism and hospitality research, life satisfaction has been evaluated from a subjective perspective (e.g., McCabe & Johnson, 2013) because the tourist experience depends on the perceptions and sensations of each individual.

Although fragility tends to rise with age, which potentially limits engagement in leisure activities (Simone & Haas, 2013), advancing years should not be viewed as a hindrance to travel; rather, it should signify an opportunity to explore the world (Forest et al., 2013). Travel encompasses various leisure components, such as mental, social, and physical aspects. Schneider and Yvon (2013) indicate that these multifaceted activities offer more benefits to seniors compared with single-component pursuits. Numerous studies have specifically demonstrated that increased involvement in tourism and leisure activities contributes to extended life expectancy, enhanced health conditions, and an improved life satisfaction for seniors (e.g., Hendricks & Cutler, 2003; Lu, 2011; Teaff, 1985). Conversely, Neulinger (1982) suggested that a lack of tourism activity diminishes life satisfaction. The activity theory, which advocates that maintaining tourism activities among seniors is crucial for their overall satisfaction, aligns with the findings of these studies (Havighurst & Albrecht, 1953).

The literature underscores the significance of motivation in comprehending tourist behavior. Uncovering the reasons behind the travel desires of older individuals and the factors that drive them forward contributes to a deeper understanding of the senior tourism market (Jang & Wu, 2006; Kim et al., 1996). Furthermore, by identifying travel barriers, we can gain insights into the reasons individuals refrain from engaging in particular tourism activities (Chen & Wu, 2008; McGuire et al., 1986).

In this regard, several studies have examined senior travel or segmented this market on the basis of motivation and perceived barriers (e.g., Fleischer & Pizam, 2002; Lee & Tideswell, 2005; McGuire et al., 1986; Losada et al., 2017, 2018). In the case of motivation, it has been applied to assess behavioral outcomes, the most common ones being destination loyalty (Yoon & Uysal, 2005) and satisfaction levels (Devesa et al., 2010; Meng et al., 2008; Nicolau et al., 2020).

Independent of the primary motivation for travel, travel itself can contribute to life satisfaction by creating a positive post-trip effect, often with individuals feeling that their health has improved (Sirgy et al., 2011). In this context, health is considered a capital to be preserved and valued given its central role in the concept of quality of life and life satisfaction (Clarke et al., 2003). The well-being associated with its preservation has been acknowledged as a social need, thus highlighting its capacity to influence consumer decisions concerning destination selection and vacation types significantly (Pike et al., 2016).

While participation in tourism activities is a critical aspect of the senior stage for many individuals and despite the importance of the relationship among motivations, constraints, and life satisfaction, limited research has focused on the connection between the travel behaviors of older individuals and how these behaviors contribute to their life satisfaction. Understanding seniors' life satisfaction is crucial to deepen our knowledge of the senior tourism market.

Within the domain of tourism research centered on the senior market, numerous studies have examined the general traits of this market. However, limited emphasis has been given on exploring the positive impacts that tourism activities exert on seniors' life satisfaction. Existing studies on travel motivations and barriers, as well as life satisfaction in seniors, are spread across various disciplines. However, little research has examined the explicit relationship between these three constructs (Nimrod & Adoni, 2006; Silverstein & Parker, 2002). Furthermore, motivation has not been explicitly examined as a precursor to life satisfaction (Woo et al., 2014), and minimal attention has been directed toward the effects of travel barriers on tourist behavior, let alone their effect on life satisfaction.

The aim of this study is to assess the impact of life-enhancing motivations and constraints related to tourism on post-trip life satisfaction. In this scenario, the study uses leisure constraints theory (Jackson and Searle, 1985; Jackson et al., 1993) to examine the various barriers that individuals may face when engaging in tourism activities, thus limiting their ability or willingness to engage in certain travel pursuits. In addition, it uses expectancy-value theory (Eccles, 1983; Eccles & Wigfield, 2002) to provide insights into why individuals opt for specific travel activities. This theory posits that people make decisions about participating in a specific behavior by assessing their anticipated success in attaining desired outcomes from a tourism activity and evaluating the perceived value of the associated results. As senior tourists' participation in tourism activities can result in various psychological outcomes and behaviors, this study postulates the inclination to engage in social comparisons where individuals assess their tourism experiences in relation to others, which is in line with social comparison theory (Festinger, 1954). In the realm of tourism, individuals may evaluate their experiences by comparing them with those of others, thus affecting their satisfaction levels. Critical to this context of senior tourists is the fact that this comparative process can significantly influence perceived gains or losses associated with tourism, which aligns with prospect theory's reference dependence (Kahneman and Tversky, 1979). Prospect theory proposes that individuals evaluate outcomes relative to a comparison standard—an expected outcome—rather than in absolute terms. Accordingly, this study proposes that individuals set benchmarks for their motivations. These benchmarks act as comparison standards for individuals to evaluate their motivations, thereby influencing overall life satisfaction.

The empirical application is conducted in thermal tourism. As mentioned earlier, traveling can enhance life satisfaction through fostering a positive post-trip impact, which frequently results in individuals perceiving an improvement in their health (Sirgy et al., 2011). In this regard, thermal tourism experiences are characterized by attaining these benefits; moreover, this type of tourism

has been gaining a significant position in the global tourism and hospitality industry (Alén et al., 2014). Considering that thermal tourism can be viewed as a package of products in which the main motivation is health and natural resources serve as tools (typically mineral-medicinal water and derivatives), this type of tourism aims to provide tourists with physical and mental improvement (Cunha, 2006) through the promotion or maintenance of their health and well-being (Voigt et al., 2011). Beyond these general benefits, thermal tourism was chosen as the context of analysis due to its unique alignment with the preferences and needs of the senior population (Buyuk & Akkus, 2022). Unlike other wellness modalities (e.g., yoga retreats, detox camps, or holistic spas), thermal tourism combines therapeutic benefits with accessible leisure activities in an environment often tailored to aging individuals (Brandão et al., 2021; Kokot & Turnšek, 2022; Pinos-Navarrete & Toro-Sánchez, 2025). Thermal spas typically offer services that address chronic conditions, reduced mobility, and age-related ailments—characteristics that make them particularly appealing and suitable for older adults (Loureiro et al., 2023). Moreover, this type of tourism foster opportunities for social engagement and psychological restoration, which are key contributors to seniors' post-trip life satisfaction. As such, thermal tourism provides a naturally congruent context in which to examine the interplay between motivations, constraints, and subjective well-being among senior travelers.

2. Motivations, constraints, and life satisfaction: Research hypotheses

Motivation not only affects the initial purchase decision but also the tourist experience and behavioral intentions (Lomine & Edmunds, 2007). Ottoo et al. (2020) considered variables related to motivations, preferences, sociodemographic profiles, and travel characteristics as valuable indicators for understanding the travel behavior of seniors. In this context, the application of expectancy-value theory (Eccles, 1983; Eccles & Wigfield, 2002) to tourism and travel motivations enables the understanding of why individuals select certain travel activities over others. Essentially, this theory suggests that individuals decide whether to engage in a specific behavior on the basis of their expectations of success in achieving desired outcomes from a tourism activity. Such decisions are influenced by their perceived value of the outcomes associated with such behavior. Their outcomes include the cultural experiences they gained, the relaxation they achieved, the knowledge they acquired, or the social connections they made during a trip. In line with this theory, the literature on senior travel shows that the most common motivations among seniors include novelty, entertainment, relaxation, socialization, and intrinsic motivation (e.g., Chen & Wu, 2008; Huang & Tsai, 2003; Jang & Wu, 2006, Woo et al., 2004). In the case of novelty, Sellick (2004) identified a strong desire for knowledge among seniors. Relaxation and entertainment were found to be important for senior tourists by Huang and Tsai (2003) and Prayag (2012). Eusébio et al. (2017) discovered that most senior tourists preferred activities that involved interactions with locals, that is, activities promoting socialization. Furthermore, seniors are likely to have intrinsic motivations, such as self-realization or nostalgic reminiscences, when they travel. Relating these motivations to Maslow's hierarchy of needs, they are located within the highest level of needs (Csikszentmihalyi & Kleiber, 1988), thus implying that seniors' motivations are more aligned with growth needs rather than basic needs. In this regard, Cordes and Ibrahim (1999) argued that seniors' travel experiences satisfy the needs for self-actualization and personal potential.

Along this line, expectancy-value theory distinguishes between different types of task value (Eccles, 1983; Eccles & Wigfield, 2002), including attainment value ("personal importance of doing well"), intrinsic value ("enjoyment of the activity itself"), and utility value ("perceived

usefulness of the activity"). In the context of tourism activities, individuals may be motivated by i) the personal significance of the experience as it aligns with their interests and values (attainment value). For instance, an individual opts to visit historical landmarks not only because they value the personal significance of learning about the history of a particular region but also because the experience contributes to their personal growth as a human being; ii) the enjoyment of travel (intrinsic value) when someone opts to go on hiking in a scenic area just because they enjoy the experience of being in nature, the physical activity, and the beauty of the surroundings. In this sense, the joy and pleasure derived from the travel experience itself have an intrinsic value, and the individual is not motivated by any external rewards; iii) the practical benefits (utility value) for a business traveler attending a conference in a different city may find networking opportunities, thus gaining industry knowledge and establishing professional connections; a family going on a beach vacation during the summer not only for the enjoyment but also for practical benefits such as the opportunity for rest and relaxation, having a break from work-related stress, and a chance to strengthen family bonds; or a group of senior friends taking a wellness retreat so they not only enjoy the natural surroundings and leisure activities but also obtain practical benefits, such as health benefits of spa treatments, yoga sessions, and nutritious meals (Ahani et al., 2019; Han et al., 2017), thus contributing to their overall well-being. Woo et al. (2014) identified that senior motivation is a critical predictor of life satisfaction. Specifically, Nimrod and Rotem (2012) found that vacation activities involving new experiences (novelty) lead to increased well-being. Additionally, Morgan et al. (2015) demonstrated that participation in tourist activities encourages individuals to resume physical activity, thus impacting their life satisfaction. Furthermore, Toepoel (2013) and Ovsenik (2015) suggested that social interactions and satisfaction with these interactions are essential for reducing loneliness, thus promoting life satisfaction. These results are in line with the two components of expectancy-value theory. Given that individuals assess their expectations of success in achieving outcomes related to a behavior (expectancy component), the positive expectations about tourism experiences that they can gain from a trip can contribute positively to their overall life satisfaction. Given that individuals value the outcomes of tourism activities, such as personal growth, learning, and well-being (value component), these positive evaluations can enhance their overall life satisfaction. As long as engaging in tourism activities that align with an individual's personal motivations and values can act as a positive contributor to overall life satisfaction, their ability to pursue and enjoy such experiences may enhance their perception of life as satisfying and meaningful. Accordingly, the following hypothesis is stated:

Hypothesis 1a: *Tourism-related life-enhancing motivations have a positive effect on life satisfaction after a tourism experience.*

The literature indicates the importance of acknowledging specific barriers that hinder seniors from engaging in travel. While this topic has been less frequently studied than motivation, notable works by McGuire (1984), Crawford et al. (1991), Sert (2019), and Karl et al. (2020) classified barriers as intrapersonal, interpersonal, and structural that can limit or restrict an individual's choices, thus impacting their overall tourism experience, in line with the leisure constraints theory (Jackson and Searle, 1985; Jackson et al., 1993). Intrapersonal barriers are related to physical and psychological conditions, such as physical and mental health, safety, and self-confidence. According to Huber et al. (2018), these barriers significantly affect seniors' participation in tourism activities and destination choice. Safety encompasses an individual's confidence in their motor and psychological abilities (Wen et al., 2020) and their perception of threats to their integrity in a particular destination based on the perceived level of adaptation of tourism infrastructure to their needs (Mary et al., 2020). Interpersonal barriers are linked to the lack of friends or family with

whom to travel (Ashton et al., 2015; Wen et al., 2020). Finally, structural barriers encompass external elements, such as income, family approval, dependence on family members, and difficulty accessing information (Walker and Virden, 2005). Thus, drawing on leisure constraints theory, this research considers the proposal of Woo et al. (2014), who, taking McGuire's (1984) classification of seniors' barriers into five dimensions (external resources, time factors, approval, social factor, and physical well-being), argued that these barriers can reduce seniors' satisfaction with life. In line with this argument, this study hypothesizes:

Hypothesis 1b. *Tourism-related constraints have a negative effect on life satisfaction after a tourism experience.*

Engaging in tourism activities may yield psychological and behavioral outcomes for individuals, thus, individuals may engage in social comparisons. Festinger's (1954) social comparison theory posits that individuals evaluate their social and personal value by measuring themselves against others. In the context of tourism activities, individuals may compare their experiences and outcomes with those of others. Reflection on personal experiences is an inherent human trait (Neisser and Jopling, 1997), and comparing an individual's tourism experiences with those of others is an extension of this reflective process. Such comparison provides a basis for self-assessment and understanding. Given that tourism activities are subjective experiences, individuals may seek to gauge their uniqueness and confirm that their choices were enjoyable by comparing them with those of others. This comparison can influence satisfaction because individuals may compare their vacation experiences to those of others, thus leading to perceptions of satisfaction or dissatisfaction on the basis of these comparisons. These comparisons may impact the perceived gains or losses linked to the tourism experience, thereby influencing overall outcomes such as post-trip life satisfaction, which is in accordance with prospect theory's reference dependence (Kahneman and Tversky, 1979). Prospect theory suggests that individuals assess potential outcomes in relation to a comparison standard, typically an expected outcome, rather than in absolute terms. Consequently, this study posits that individuals establish comparison standards (or reference points) for the motivations examined in this study. These reference points, shaped by their expectations, serve as benchmarks against which individuals assess their current motivation levels, thus influencing life satisfaction.

Following with these arguments, the interplay between motivations, constraints, social comparisons, and overall life satisfaction should align with the principles of reference dependence in prospect theory. Given that individuals engage in social comparisons regarding their tourism experience, they assess their satisfaction and other outcomes relative to comparison standards. Accordingly, positive social comparisons, where individuals feel their experiences exceed their expectations, can enhance life satisfaction. In the same vein, unfavorable social comparisons may lead to dissatisfaction if experiences fall short of established comparison standards. These social comparisons of motivations and constraints can impact overall satisfaction because individuals may derive satisfaction from meeting or exceeding their expectations. Moreover, social comparisons provide a reference dependence framework for evaluating their experiences relative to others, which, in turn, can affect not only their perceptions of tangible aspects of the tourism destination visited but also their overall life satisfaction after the trip. Accordingly, the following two hypotheses are stated:

Hypothesis 2a. *The effect of tourism-related life-enhancing motivations on post-trip life satisfaction is reference dependent.*

Hypothesis 2b. *The effect of tourism-related constraints on post-trip life satisfaction is reference dependent.*

Deriving from the previous arguments, social comparisons in the context of tourism can be related to the concept of loss aversion (Kahneman and Tversky, 1979), which is a central element in prospect theory. It suggests that people generally experience the effect of losses more intensely than the joy derived from equivalent gains, thereby producing asymmetric effects on any outcome such as life satisfaction. Specifically, individuals engaging in social comparisons may perceive certain aspects of their tourism experience as losses if they fall below their comparison standards. In other words, given that social comparisons involve evaluating an individual's own outcomes compared with others, if individuals perceive that others had better experiences, they may feel a sense of loss, thus feeling dissatisfied with their own experience. In the framework provided by prospect theory, the occurrence of loss aversion can influence overall satisfaction levels in asymmetric ways. Negative social comparisons may amplify the sense of loss, thus making individuals more dissatisfied with life than if they had positive social comparisons. Along these lines, the study hypothesizes:

Hypothesis 3. *Reference-dependent dimensions have an asymmetric effect on post-trip life satisfaction.*

3. Research design.

3.1. Study context and sample

The empirical application is conducted within the context of thermal tourism. As mentioned earlier, travel has the potential to improve life satisfaction by generating positive post-trip effects, thus often leading individuals to perceive enhanced health (Sirgy et al., 2011). In the realm of thermal tourism, these benefits are a defining feature, positioning it significantly within the global tourism and hospitality industry (Alén et al., 2014). Defined as a collection of offerings where health is the primary motivation, thermal tourism aims to facilitate physical and mental enhancement (Cunha, 2006), thus contributing to the maintenance of senior tourists' health and well-being (Voigt et al., 2011). Consequently, thermal tourism seems to be the ideal context to analyze the interplay among motivations, constraints, and post-trip life satisfaction of senior tourists.

Furthermore, few studies have addressed the motivations of seniors specifically regarding visits to thermal destinations and spas (Lopes, 2020). Notably, most of these outcomes are mainly exploratory. Some studies in health tourism suggest that the main motivations include relaxation and pampering (Azman and Chan, 2010); health and beauty, self-reward and indulgence, and relaxation (Mak et al., 2009); and self-development for personal growth (Kim et al. 2017). For studies that evaluate motivations for visiting a spa but not specifically within the senior segment, identified motives include stress reduction and relaxation, physical health improvement, and therapeutic solution (Brandão et al., 2021; Quintela, 2021). Although interest in health-related aspects has risen, few studies have been conducted on thermal destinations in the tourism and hospitality literature (Azman & Chan, 2010). Notably, those that exist primarily focus on the supply side (Brandão et al., 2021). Thus, this study will help increase our knowledge on senior tourist behavior in thermal destinations.

Data were collected in Spain and Portugal between December 2019 and March 2020. We conducted interviews with individuals who opted for thermal destinations and others who opted

for alternative choices. To ensure that our sample adequately reflects the diversity of the senior tourism market, we deliberately included both individuals who opted for thermal destinations and those who chose alternative types of tourism. This inclusive sampling strategy recognizes that the senior travel segment is not homogeneous—older adults differ in their preferences, motivations, financial capacities, and physical conditions. By capturing responses from a broad spectrum of tourism choices, the study provides a more comprehensive view of seniors' post-trip life satisfaction across varied contexts. This approach mitigates the risk of sample selection bias and enhances the generalizability of our findings. If only individuals who selected thermal destinations were interviewed, the sample could be biased and not reflective of the entire population with diverse preferences. Such a restricted sample could overrepresent those already inclined toward wellness tourism and underrepresent seniors who, for reasons such as cost, mobility, or personal interest, opt for other types of travel. Including both groups ensures a more balanced representation of the senior tourism landscape and strengthens the validity of comparative insights between spa-goers and non-spa travelers.

We further address potential sample selection concerns through the application of the Heckit model, which accounts for the non-random nature of spa participation. This procedure allows us to correct for any unobserved factors that may influence both the decision to select a spa destination and post-trip life satisfaction. In addition, we acknowledge that differences in socioeconomic or health profiles may exist between spa-goers and non-spa travelers. While our dataset does not include direct health indicators, we partially address these potential disparities by controlling for age, income, and travel frequency—variables that are likely to capture relevant variation in both financial capacity and health-related travel patterns. This methodological design allows for a more balanced assessment of life satisfaction outcomes across different segments of senior tourists.

Convenience sampling was employed. However, efforts were made to ensure appropriate representation based on gender and age quotas. Notably, the age cutoff was set at 55 years because the majority of existing studies define the onset of old age between 55 and 65 years (Patterson, 2006). At the end of the process, a total of 829 valid questionnaires were collected, with 439 from Spain and 390 from Portugal. Among the respondents, 424 were thermal participants.

3.2. Methodology

To analyze whether tourism-related life-enhancing motivations (TM_i) and tourism-related constraints have an effect on post-trip life satisfaction (LS_i), we first estimate the following basic model:

$$LS_i = \alpha + \sum_{j=1}^{J} \beta_{Mj} \cdot TM_{ij} + \sum_{k=1}^{K} \beta_{Cj} \cdot TC_{ik} + \sum_{h=1}^{H} \gamma_h \cdot CV_{i,h} + \varepsilon_i, \qquad (1)$$

where the dependent variable LS_i measures life satisfaction after an individual i visiting a thermal destination; TM_{ij} is a tourism-related life-enhancing motivation j; TC_{ik} is a tourism-related constraint k; CV_{ih} is a control variable h (gender, age, and income), and ε_i is the error term; α is the constant, β_{Mj} and β_{Cj} reflect the effects of the tourism motivations and constraints, respectively, on satisfaction, and γ_h shows the effect of control variable h on satisfaction.

Next, we use the following model to test the reference dependence hypothesis by including the difference between motivations and expected motivations (DTM_{ij}), which is defined as the difference between the motivation that individual i has and the expected motivation of the segment

to which this individual i belongs. DTC_{ij} is defined analogously for constraints. Accordingly, Equation 1 becomes

$$LSS_i = \alpha + \sum_{j=1}^{J} \beta_{DTMj} \cdot DTM_{ij} + \sum_{k=1}^{K} \beta_{DTC} \cdot DTC_{ik} + \sum_{h=1}^{H} \gamma_h \cdot CV_{i,h} + \varepsilon_i, \qquad (2)$$

where the parameters β_{DTMj} and β_{DTCk} reflect the reference dependence of these variables on life satisfaction.

Finally, for those motivations and constraints that are reference dependent, we look into potential asymmetric effects by breaking down the differences in Equation 2 into positive and negative differences. Accordingly, $DTMP_{ij}$ is defined as the difference between motivation j that individual i experiences and the expected motivation of this same individual i when this difference is positive. $DTMN_{ij}$ is the difference between the motivation j that individual i experiences and the expected motivation of this same individual i when this difference is negative. Analogously, the variables $DTCP_{ik}$ and $DTCN_{ik}$ are defined for constraints. Consequently, the following model is obtained:

$$LSS_i = \alpha + \sum_{j=1}^{J} \beta_{DTMPj} \cdot DTMP_{ij} + \sum_{j=1}^{J} \beta_{DTMNj} \cdot DTMN_{ij} + \sum_{k=1}^{K} \beta_{DTCPj} \cdot DTCP_{ij} + \sum_{k=1}^{K} \beta_{DTCNk} \cdot DTCN_{ik} + \sum_{h=1}^{H} \gamma_h \cdot CV_{i,h} + \varepsilon_i, \qquad (3)$$

Parameters β_{DTMPj} (β_{DTCPk}) and β_{DTMNj} (β_{DTCNk}) capture the effects of positive and negative differences, respectively. Loss aversion will be detected for motivations if $\beta_{DTMPj} < \beta_{DTMNj}$ and for constraints if $\beta_{DTCPk} < \beta_{DTCNk}$.

As explained earlier, given that tourists have different alternatives for vacations (i.e., other sampled individuals opt for tourism activities other than spa activities), potential sample selection bias can lead to spurious estimates. Consequently, we resort to the equations system provided by the Heckit model (Heckman, 1976) by adding a second equation (Equation 4) to each of the previous three equations that explains the decision to go to a thermal destination rather than any other tourism alternatives.

$$Spa_i^* = \delta_1 + \delta_2 \cdot Gender + \delta_3 \cdot Age + \delta_4 \cdot Income + \delta_5 \cdot Frequency + u_i, \qquad (4)$$

where Spa_i* is a latent variable such that LS_i is observed only if Spa_i* is greater than zero. To estimate this Equation 4, we define a dummy variable Spa_i that takes a value of 1 if Spa_i* > 0, and 0 otherwise. In other words, Spa_i = 1 implies that the individual i opted for a thermal destination. Equation 4 includes the same control variables as in the life satisfaction equations (namely, gender, age, and income) plus the variable frequency measured as the number of times that tourist i travels in a year. Frequency is used as the exclusion restriction, which is a characteristic of the Heckit model. To estimate Heckit models properly, a variable that is found to be significant in the selection equation (Equation 4) and not significant in the response equations (Equations 1, 2, and 3) must act as the exclusion restriction. The set of parameters δ capture the effects of these variables on the decision to opt for a thermal destination rather than any other tourism alternatives. The error term u_t (along with ε_t) follows a bivariate normal distribution with zero mean, variances σ_u and σ_ε, and covariance $\sigma_{\varepsilon u}$.

3.3. Variables

Dependent variables

Post-trip life satisfaction: In line with Diener et al. (1985), Sirgy (2002), and Woo et al. (2014), using a five-point Likert scale on six items, we measure the individual's life satisfaction after obtaining thermal services. Specifically, the six items are: i) In general, I think I will feel happy upon returning from the trip; ii) I think my satisfaction with life in general will increase slightly after this trip; iii) So far, I have been getting important things I want in life; iv) Although I have my ups and downs, I think I will feel fine with my life overall just after the trip; v) In general, at the end of this trip I will find that this experience was memorable and will enrich my life satisfaction; and vi) I think that after this trip, I will lead a meaningful and rewarding life.

Spa: This variable is measured through a dummy variable that takes a value of 1 if the individual's trip is to a thermal destination, and 0 otherwise.

Table 1 shows the descriptive statistics for these dependent variables and for independent variables described next.

Table 1. Descriptive statistics

Variable	Mean	Proportion	SD
Satisfaction	3.66		0.77
Spa		45%	0.50
Novelty	3.65		0.86
Entertainment	2.76		1.04
Relaxation	3.72		0.73
Socialization	3.69		0.88
Internal motives	3.69		0.80
Lack of information	2.89		1.09
Time and money	2.09		0.75
Approval and Social status	1.74		0.69
Physical shape	1.92		0.83
Gender		62%	0.48
Age	66.56		7.82
Income 1		36%	
Income 2		41%	0.49
Income 3		19%	0.40
Income 4		3%	0.18
Frequency 1		30%	
Frequency 2		52%	0.50
Frequency 3		12%	0.33
Frequency 4		4%	0.19
Frequency 5		3%	0.18

Independent variables

Motivations: In line with Woo et al (2004) and based on Huang and Tsai (2003), Jang and Wu (2006), and Sangpikul (2008), using a five-point Likert scale on several items, the following motivations are examined: novelty (seven items), entertainment (three items), relaxation (four items), socializing (three items), and internal motivations (five items). Table 2 shows the specific list of motivations.

Table 2. Items utilized in tourism-related life-enhancing motivations and constraints.

Motivations	Novelty	1. Learn new things 2. Seek intellectual enrichment 3. Seek spiritual enrichment 4. Visit new places and see new things 5. Experience different cultures and ways of life 6. See how other people live 7. See things I do not usually see
	Entertainment	1. Participate in physical activities 2. Have sports opportunities 3. Improve my mental and physical health
	Relaxation	1. Do nothing 2. Rest and relax 3. Escape from the daily grind 4. Enjoy life
	Socialization	1. Spend time with family 2. Meet new people and socialize while traveling 3. Visit friends and relatives who live in other cities
	Internal motivations	1. Spend time with a group of friends 2. Visit places you always wanted to visit 3. Have a sense of self-realization 4. Reminiscence 5. Spend time alone
Constraints	Lack of information	1. Not having information about the place to visit 2. Having difficulty obtaining information 3. Travel requires too much of yourself when planning
	Time and money	1. I cannot afford to spend money on travel. 2. I do not have time to travel. 3. I have more important things to do than travel. 4. I do not want to travel to interrupt my normal life. 5. I do not have clothes or luggage to travel.
	Approval and social status	1. My spouse/partner does not like to travel. 2. I feel guilty about traveling. 3. I am concerned that the family has not approved the trip. 4. I fear leaving home alone. 5. I do not have and company when traveling. 6. My family and friends are not interested in traveling.
	Physical shape	1. I do not have the energy to travel. 2. My health prevents me from traveling. 3. I have food restrictions that limit travel. 4. I fear traveling through any means of transport. 5. I feel that I am too old to travel. 6. I have a disability that limits travel.

Constraints: In line with Woo et al (2004) and based on Chen and Wu (2008), Lee and Tideswell (2005), and McGuire (1984), using a five-point Likert scale on several items, the following constraints are analyzed: lack of information (three items), time and money (five items), approval and social status (six items), and physical shape (six items). Table 2 presents the list of constraints.

Expected motivation: To determine the effect of the differences between people's motivation and their like-minded's motivations (i.e., people in their same market segment), we first segment the sample according to said motivations by applying a hierarchical cluster analysis using Ward's method (Sánchez-Pérez et al., 2021). By using Lewis and Thomas' (1990) two criteria in which the optimal number of segments must explain at least 65% of the variance and each additional segment reflects a minimum of 5% increase in the explained variance, we find that the optimal number of segments is seven (see Table 3). For each of the seven segments, we calculate the averaged motivation against which we compare the individual's motivation. This way, we can identify the level of motivation of individual *i* and compare it with the level of motivation of the segment to which this individual belongs.

Expected constraint: The same procedure as in motivations is applied.

Table 3. Segments based on motivations

No. of Segments	σ^2*	σ^2(%)*	Explained Variance	$\Delta\sigma^2$*
10	92.540	18.483	1.430	81.517
9	99.702	19.913	2.300	80.087
8	111.216	22.213	3.826	77.787
7	130.371	26.039	5.169	73.961
6	156.249	31.207	5.268	68.793
5	182.626	36.475	6.622	63.525
4	215.783	43.098	11.930	56.902
3	275.514	55.028	12.594	44.972
2	338.569	67.621	32.379	32.379
1	500.683	100.000	0.000	

*Intra-group variance.

Table 4 presents the means of the expected motivations and constraints for each segment.

Table 4. Averaged values of motivations per segment

	Novelty	Entertainment	Relaxation	Socialization	Internal motives	Lack of information	Time and money	Approval and Social status	Physical shape
Segment 1	4.19	3.57	4.05	4.24	4.04	2.27	1.69	1.33	1.22
Segment 2	3.07	2.25	3.47	3.10	3.31	3.18	2.41	2.07	2.34
Segment 3	3.87	2.64	3.77	3.93	3.96	3.45	2.25	1.86	2.13
Segment 4	4.66	4.38	4.58	4.64	4.82	4.47	3.40	2.97	3.95
Segment 5	4.54	3.61	4.20	4.57	4.50	3.60	2.13	1.72	1.80
Segment 6	3.50	2.54	3.61	3.41	3.31	1.98	1.68	1.34	1.48
Segment 7	2.39	1.88	2.75	2.70	2.72	2.01	1.96	1.78	1.91

Control variables

Gender is captured by a dummy variable. It takes a value of 1 when the individual is a woman and 0 otherwise. Age is measured through a quantitative variable. Income is measured through a categorical variable where Income 1 represents people with lower than €1000, Income 2 is for those between €1001 and €2000, Income 3 is for those between €2001 and €3000, and Income 4 is for people with over €3001. Income 1 is taken as the base reference to estimate the effects of the other categories.

The frequency with which people travel is measured through a categorical variable where Frequency 1 means that the individual usually travels once a year, Frequency 2 between two and three times a year, Frequency 3 between four and five, Frequency 4 between six and seven, and Frequency 5 over eight times a year.

4. Results

Table 5 shows the parameter estimates of equations 1 and 4, as presented in the methodology. Out of the five motivations analyzed, novelty, socialization, and internal motivations exert a positive effect on life satisfaction. Thus, for these three motivations, these results support the basic Hypothesis 1a that tourism-related life-enhancing motivations have a positive effect on life satisfaction after a tourism experience. This finding is in line with the expectancy-value theory (Eccles, 1983; Eccles & Wigfield, 2002). As individuals evaluate their expectations of success in achieving outcomes linked to a particular behavior (expectancy), the positive expectations regarding the tourism experiences they can derive from a trip may positively impact their overall life satisfaction. Furthermore, as individuals place value on the outcomes of tourism activities (value component), motivations such as novelty, socialization, and internal motivations can augment their overall life satisfaction. As mentioned, engaging in tourism activities that resonate with an individual's personal motivations and values has the potential to contribute positively to their overall life satisfaction.

Interestingly, no tourism-related constraint is found to be significant. Thus, Hypothesis 1b, which posits that tourism-related constraints have a negative effect on life satisfaction after a tourism experience, is not supported. Notably, the relationship between tourism constraints and life satisfaction is complex. Drawing on leisure constraints theory, while constraints on tourism activities may limit certain aspects of life satisfaction (e.g., if someone is unable to engage in activities they enjoy because of constraints, it may lead to frustration or dissatisfaction in their tourism pursuits), individuals may find compensatory mechanisms to offset the impact of constraints on life satisfaction (such as finding alternative leisure activities that are not constrained or developing coping strategies to deal with the limitations) (Jackson and Searle, 1985; Jackson et al., 1993). Along this line, Huber et al. (2018) suggested that in the face of constraints that arise throughout life, senior tourists tend to seek facilitators to overcome these constraints. Accordingly, the constraints presented by McGuire (1984) and used in this research can be mitigated. For instance, when faced with the barrier of physical condition, seniors may select health and wellness-related services—or spas—because these services provide facilities and equipment that can help them recover or alleviate health problems. Other facilitators or strategies that can also be employed include, as in the case of a senior lacking companionship, traveling through a social program or association. This approach can open opportunities to make new friends and find companionship for the experience.

In addition, the absence of a significant effect may reflect seniors' ability to proactively adapt their travel behavior to match their physical, emotional, and social realities. Older adults may use coping strategies such as psychological reframing, itinerary adjustment, or advance logistical planning to minimize friction and preserve the benefits of travel. These adaptive responses reduce the salience of barriers and may even transform potential constraints into manageable aspects of the travel experience. Such flexibility is consistent with theories of resilience and successful aging (Atchley, 1989; Baltes & Baltes, 1990; Wagnild & Young, 1993), which suggest that older individuals draw upon life experience and emotional regulation to maintain well-being despite external limitations. Specifically, resilience theory emphasizes how older adults develop adaptive capacities—such as perseverance, equanimity, meaningfulness, and self-reliance—that help buffer the impact of physical and psychological constraints (Trică et al., 2024; Wagnild & Young, 1993). These traits enable seniors to reframe challenges, maintain emotional stability, and pursue valued experiences such as travel, even in the presence of limitations. In a similar vein, the selective optimization with compensation model (Baltes & Baltes, 1990) proposes that aging individuals adapt to changes through three interrelated strategies: selection (focusing on fewer but more meaningful activities), optimization (allocating resources to maintain functioning), and compensation (employing alternative methods when capacities decline). Applied to our tourism case, seniors may choose destinations and activities that require less exertion (selection), engage in more deliberate planning or support services (optimization), or rely on guided tours and group travel when needed (compensation), thereby reducing the perceived impact of constraints on their well-being. Complementing these perspectives, continuity theory posits that older adults strive to preserve patterns of behavior, lifestyle, and relationships that are consistent with their past (Atchley, 1989). This argument may involve adapting prior travel habits to present realities, thus preserving a sense of identity and stability while still engaging in meaningful leisure. These theoretical frameworks offer an explanation for why constraints may not significantly diminish seniors' post-trip life satisfaction: through resilience, adaptive strategies, and continuity, many older adults find ways to experience fulfillment even in the face of limitations.

Table 5. Effect of motivations on life satisfaction

	Satisfaction equation		Spa decision	
Variables of interest	Parameter	SD	Parameter	SD
Motivations				
Novelty	0.174b	0.077		
Entertainment	-0.035	0.059		
Relaxation	0.062	0.065		
Socialization	0.174a	0.068		
Internal motivations	0.250a	0.073		
Constraints				
Lack of information	-0.005	0.050		
Time and money	-0.039	0.062		
Approval and social status	0.088	0.071		
Physical shape	-0.089	0.061		
Control variables				

Gender	-0.063	0.096	0.078	0.115
Age	0.004	0.007	-0.019b	0.008
Income 2	0.026	0.113	-0.041	0.135
Income 3	0.071	0.135	-0.017	0.171
Income 4	0.408c	0.234	0.052	0.318
Frequency 2			0.772a	0.136
Frequency 3			0.595a	0.195
Frequency 4			1.367a	0.322
Frequency 5			1.504a	0.318
Constant	1.104	0.545b	0.612	0.556

a = $p < 0.01$; b = $p < 0.05$; c = $p < 0.10$

Regarding the control variables, only Income 4 (people with over €3001) presents a significant and positive parameter in the satisfaction equation, which means that higher incomes result in higher satisfaction. This positive effect is only found for the highest level of income. For the equation that explains the spa decision, age has a significant and negative effect, which means that among senior tourists, the oldest people are not opting for this service. Moreover, the frequency of trips per year has an increasing effect. The more they travel, the more likely they are to go to a spa in one of their trips.

Table 6 presents the parameter estimates of equations 2 and 4 that test the reference dependence hypothesis. We find that the parameters associated with relaxation and internal motivations are significant and positive. In the table, the motivation-related variables are expressed as the difference between the individual's motivations and expected motivations. Thus, a positive parameter means that when the individual experiences a motivation that is higher than the motivation of the like-minded, the level of satisfaction is greater. Consequently, these results favor Hypothesis 2a, which posits that the effect of tourism-related life-enhancing motivations on life satisfaction is reference dependent. Social comparisons, as posited by Festinger (1954), intervene in the relationship between motivations and overall satisfaction in a consistent manner with the principles outlined in prospect theory's concept of reference dependence (Kahneman and Tversky, 1979). As individuals engage in social comparisons regarding their tourism experiences, they evaluate their satisfaction and other outcomes in relation to established comparison standards.

Novelty is no longer significant in this model, which means that this motivation affects life satisfaction in absolute terms. People who feel attracted to novelty do not compare their level of motivation with others, which is against Hypothesis 2a. The positive impact on life satisfaction is more self-contained and may not rely as much on how the experience compares with specific expectations or social benchmarks for that matter. This finding suggests that novelty is likely to be intrinsically motivated—driven by a personal desire for intellectual enrichment, discovery, and self-growth rather than influenced by social evaluation or comparison. As such, it is in line with the intrinsic value component of expectancy-value theory (Eccles & Wigfield, 2002) and also with self-determination theory, which posits that novelty-seeking behaviors are often expressions of autonomy and curiosity (Deci & Ryan, 1985). However, relaxation and internal motivations have a benchmark against which people make comparisons. Consequently, while some reference-dependent motivations are influenced by the relative success of meeting expectations or comparing experiences with others, such as relaxation and internal motivations, other motivations such as

novelty affect life satisfaction in absolute terms, thereby providing intrinsic satisfaction independent of external comparisons. This distinction highlights the diverse psychological underpinnings of tourism motivations and reinforces the idea that not all motivations are influenced by reference points or comparative standards. The specific nature of the motivations and how individuals psychologically frame and evaluate them can contribute to different patterns in their impact on overall life satisfaction.

As before, tourism-related constraints do not seem to have any effect on life satisfaction. Thus, we cannot support Hypothesis 2b for constraints. As stated earlier, the relationship between tourism constraints and life satisfaction is intricate; while constraints on tourism activities can limit specific aspects of life satisfaction, individuals may employ compensatory mechanisms (Jackson and Searle, 1985; Jackson et al., 1993), such as partaking in alternative leisure activities or implementing developing coping strategies, to mitigate the impact of such limitations. As for the control variables, all the parameters in both equations show the same significant parameters as in Table 5, which suggests that the results are robust.

Table 6. Motivations with reference dependence

	Satisfaction equation		Spa decision	
Variables of interest	Parameter	SD	Parameter	SD
Motivations				
DTM Novelty	0.097	0.089		
DTM Entertainment	-0.064	0.071		
DTM Relaxation	0.209a	0.076		
DTM Socialization	0.116	0.082		
DTM Internal motivations	0.221a	0.083		
Constraints				
DTM Lack of information	0.022	0.068		
DTM Time and money	0.021	0.075		
DTM Approval and social status	0.064	0.083		
DTM Physical shape	0.023	0.080		
Control variables				
Gender	0.063	0.103	0.072	0.115
Age	0.004	0.007	-0.019b	0.008
Income 2	0.053	0.123	-0.044	0.135
Income 3	0.011	0.147	-0.007	0.171
Income 4	0.486c	0.252	0.067	0.319
Frequency 2			0.774a	0.137
Frequency 3			0.633a	0.200
Frequency 4			1.333a	0.330
Frequency 5			1.459a	0.325
Constant	3.432a	0.499	0.603	0.558

a = $p < 0.01$; b = $p < 0.05$; c = $p < 0.10$

Table 7 shows the parameter estimates of equations 3 and 4 that test potential asymmetric effects of those motivations with a reference dependence pattern. For relaxation, the results show that positive differences (motivation greater than the like-minded) do not have any effect on life satisfaction and that negative differences (motivation lower than the people in the same segment) have a significant and negative effect. Thus, an asymmetric effect in line with Hypothesis 3 shows that reference-dependent dimensions have an asymmetric effect on life satisfaction after a tourism experience. In particular, this result suggests the existence of loss aversion in the motivation relaxation. In other words, having a motivation that is lower than the individual's segment causes a drop in life satisfaction that is greater than the potential increase in life satisfaction derived from having a motivation that is higher than the segment.

For internal motivations, we find a significant and positive effect of positive differences (motivation greater than the individual's segment) and a non-significant effect of negative differences. As before, an asymmetric effect exists as well, thus being in line with Hypothesis 3.

However, the asymmetry emerges differently. This result suggests the existence of *reverse* loss aversion in internal motivations: having internal motivations that are higher than the segment brings about an increase in life satisfaction that is greater than the potential decrease in life satisfaction derived from having internal motivations that are lower than the segment. Although this result may be seen as a departure from the tenets of the loss aversion phenomenon, internal motivations—by comparison with relaxation—include self-realization, which is a major psychological driver that prompts people to action. As such, loss aversion is reversed. This result is further discussed in the next section as a critical theoretical implication and a relevant future research line thereof.

Table 7. Asymmetric effects of motivations

	Satisfaction equation		Spa decision	
Variables of interest	Parameter	SD	Parameter	SD
DTMP Relaxation	-0.099	0.172		
DTMN Relaxation	0.431a	0.137		
DTMP Internal motivations	0.609a	0.192		
DTMN Internal motivations	0.076	0.127		
Control variables				
Gender	0.071	0.102	0.071	0.115
Age	0.001	0.007	-0.019b	0.008
Income 2	0.037	0.123	-0.045	0.135
Income 3	0.036	0.141	-0.011	0.171
Income 4	0.493b	0.249	0.058	0.318
Frequency 2			0.770a	0.137
Frequency 3			0.623a	0.198
Frequency 4			1.347a	0.328
Frequency 5			1.472a	0.323
Constant	3.578a	0.501	0.607	0.557

a = $p < 0.01$; b = $p < 0.05$; c = $p < 0.10$

Concerning the control variables, the same significant parameters as in Tables 5 and 6 are found, thereby suggesting robustness in the parameter estimates.

While no tourism-related constraint is found to have an effect on life satisfaction, tourism-related life-enhancing motivations present a diversity of effects. Entertainment and socializing do not have any effects at all. Novelty exerts a positive effect in absolute terms, and relaxation and internal motivations have positive effects in relative terms—by comparing the individual's level of motivation to a benchmark—thereby following a reference dependence pattern. Both reference dependent motivations present asymmetric effects, but the causes of asymmetry are different.

Relaxation behaves according to the principles of loss aversion, whereas internal motivations do not.

5. Conclusions

This study has assessed the impact of life-enhancing motivations and constraints related to tourism on post-trip life satisfaction. The empirical investigation, focusing on thermal destinations, reveals that while tourism-related constraints do not influence life satisfaction, life-enhancing motivations exhibit diverse effects: some motivations have no impact (e.g., entertainment and socializing), while others positively affect satisfaction in absolute terms (e.g., novelty) and in relative terms (e.g., relaxation and internal motivations), with the latter aligning with the reference dependence pattern in prospect theory. Furthermore, reference-dependent motivations display asymmetric effects. Relaxation adheres to loss aversion principles, while internal motivations exhibit reverse loss aversion.

The results have several theoretical implications. First, the finding that novelty, socialization, and internal motivations positively influence life satisfaction after a tourism experience aligns with the basic hypothesis of expectancy-value theory. Consequently, this finding validates the expectancy-value framework, thus indicating that individuals derive satisfaction when their expectations are met or exceeded (expectancy component) and when they value the outcomes of tourism activities (value component). More importantly, the differentiated impact of specific motivations (novelty, socializing, and internal) suggests that individuals assign varying levels of importance to different aspects of their tourism experience, thereby supporting expectancy-value theory's idea that individuals weigh and prioritize different motivations on the basis of their personal preferences and values. The differentiated impact implies a hierarchy of motivations in the sense that certain motivations contribute more significantly to the overall satisfaction of specific individuals than other motivations. In other words, some motivations are perceived as more central to personal fulfillment, and their realization contributes more profoundly to an individual's sense of satisfaction. In this context, the case of novelty is particularly illustrative. Unlike relaxation and internal motivations, which were found to be reference-dependent, novelty exerted its effect on life satisfaction in absolute terms—independent of social comparisons. This pattern suggests that novelty-seeking may be more intrinsically motivated, driven by curiosity, autonomy, and a desire for intellectual or experiential growth. These characteristics are not only in line with the intrinsic value dimension of expectancy-value theory but also with self-determination theory, which posits that experiences involving exploration and personal interest foster well-being by satisfying core psychological needs. The fact that individuals prioritize motivations differently on the basis of their unique life experiences, values, and personal development facilitates the understanding of the hierarchy of motivations when making decisions about travel destinations and tourism activities. The analysis of how people reach informed decision-making enhances our understanding of how they align their choices with the motivations that contribute most significantly to their overall satisfaction.

Second, the finding that no tourism-related constraint is found to be significant has theoretical implications within the framework of leisure constraints theory. Certainly, the result challenges the direct negative relationship posited in the context of leisure constraints theory, thereby suggesting that the relationship between constraints on tourism activities and life satisfaction is nuanced. Accordingly, theoretical frameworks in leisure constraints should first consider the complexity of this relationship to recognize that constraints may not always have a straightforward negative impact. Second, they should incorporate the idea that individuals may actively seek

alternatives or develop strategies to mitigate the impact of constraints on their life satisfaction. These approaches are in line with theories related to coping mechanisms and resilience in the face of constraints.

Third, in the context of life satisfaction after a tourism experience, the reference-dependent character of relaxation and internal motivations suggests that individuals have a reference point for each motivation. Thus, the satisfaction derived from each motivation is influenced by how it compares with individual's benchmarks. The existence of framing effects is linked to reference dependence. These effects refer to how the presentation of information can influence decision-making, thus leading to different responses to the same information framed in terms of potential gains or losses. Consequently, although one's reference-dependent nature implies that individuals evaluate relaxation and internal motivations on the basis of their own benchmarks, framing may affect individuals' perception of life satisfaction.

Fourth, social comparison theory posits that individuals evaluate themselves and their experiences in relation to others. Thus, the finding that relaxation and internal motivations are reference dependent implies that comparisons are a significant factor in shaping individuals' perceptions of relaxation and internal motivations. Along this line, the study contributes unique insights into the existing body of knowledge by examining the impact of social comparisons within the domain of tourism motivations and life satisfaction, thereby acknowledging the complexity of factors influencing life satisfaction after a tourism experience.

Fifth, the finding that some motivations show a reference-dependent nature whereas others do not entails that not all motivations operate in the same way regarding social comparison effects. This differentiation contributes to a granular understanding of how specific motivations contribute to life satisfaction and provides a basis for further research to explore the unique dynamics of various motivations within the tourism context. Specifically, the study's finding on the reference-dependent nature of relaxation and internal motivations can contribute to the advancement of theoretical frameworks related to social comparison in the field of tourism studies.

Sixth, the finding that an asymmetric effect exists for relaxation motivations in a loss aversion informs prospect theory such that individuals experience a more significant decrease in life satisfaction when their relaxation motivation is lower than their peers in the same segment compared with the potential increase in satisfaction when their motivation is higher. Interestingly, the result related to internal motivations that suggests the presence of reverse loss aversion in internal motivations challenges the typical loss aversion pattern. It also implies that, in the context of internal motivations, the potential increase in life satisfaction from having higher motivations than their group peers is more pronounced than the potential decrease in satisfaction from having lower motivations than their group peers. The study highlights that the reverse loss aversion observed in internal motivations differs from the loss aversion observed in relaxation motivations. Thus, this differentiation underscores the need to consider the specific characteristics of different motivation types. In other words, internal motivations may follow a different psychological pattern compared with motivations related to relaxation, which should prompt to tailoring different theoretical frameworks to accommodate the nuances of various motivation dimensions. For example, the unique psychological nature of internal motivations, such as the drive for self-realization, may lead individuals to derive greater satisfaction when their internal motivations are higher, thus aligning with the concept of reverse loss aversion. Furthermore, on account of these results, theoretical frameworks related to motivation theory may benefit from incorporating the idea of reverse loss aversion. In this regard, recognizing that certain motivations may exhibit

different patterns of sensitivity to positive and negative differences can enhance the understanding of how motivations influence certain dimensions, such as overall life satisfaction.

Regarding managerial implications, given that novelty, socialization, and internal motivations contribute positively to life satisfaction, tourism providers can design and tailor experiences that align with these motivational factors. Specifically, the introduction of novel attractions, social activities, and opportunities for self-realization within tourism offerings can result in unique and immersive experiences that cater to the desire for novelty and social engagement. This action can potentially attract individuals seeking these specific elements, thus increasing the likelihood of positive reviews and word-of-mouth recommendations. Along this line, considering the importance of the social dimension, collaboration with local communities to offer tourists opportunities for meaningful social interactions that involve cultural exchanges, community events, or guided tours led by local residents to enhance the authenticity of the experience, can contribute to the creation of packages for these tourists.

Additional managerial implications can be derived from recognizing the reference-dependent nature of some motivations, such as relaxation and internal motivations. Hence, tourism providers should i) customize experiences to align with individual preferences and reference points. Accordingly, offering a variety of relaxation options with different atmospheres and self-realization-enhancing activities can allow tourists to opt for experiences that match their unique reference points and meet diverse expectations. ii) Providers should clearly communicate what customers can expect from these offerings. Managing expectations through transparent communication can help align customer perceptions with the actual experiences, thus minimizing the potential for dissatisfaction. iii) Given that the effectiveness of wellness programs may be influenced by individual reference points, managers should develop personalized wellness programs that account for individual preferences and goals for relaxation and internal motivations. They can also offer consultations or assessments to tailor programs to the specific needs and expectations of each tourist. iv) The existence of reference dependence also implies that customers may compare experiences not only with their own benchmarks but also with those offered by different competitors. Consequently, conducting benchmarking actions to understand how a company's offerings compare with industry standards and competitors would allow managers to enhance and differentiate experiences not only across different competing offers but also according to the individual's reference points.

A final set of managerial implications results from the presence of loss aversion in relaxation motivation and reverse loss aversion in internal motivation. Regarding loss aversion in relaxation motivation, the development of strategies to address and mitigate negative differences in relaxation motivation may involve offering additional services to boost motivation levels. Likewise, recognizing that customers may place a higher value on avoiding a drop in satisfaction than on potential gains from increased relaxation motivation, managers must emphasize the value proposition of relaxation offerings in marketing and communication materials by highlighting the way the provided experiences can help customers avoid negative differences in motivation. For instance, spa providers can frame their offerings using loss-avoidance language (e.g., "Don't miss out on the deep rest you deserve" or "Avoid fatigue by restoring your energy with our customized relaxation treatments"). This kind of framing taps into the psychological tendency to avoid losses more strongly than to pursue gains. In service design, providers can create pre-arrival assessments to identify relaxation expectations and then offer tailored enhancements (e.g., low-stimulation environments, guided relaxation, or personalized recovery programs) to ensure those expectations

are met or exceeded. Additionally, even if somewhat bold and unconventional, spas could offer "relaxation guarantees" (e.g., complimentary follow-up sessions if satisfaction falls short) may help reassure risk-averse seniors and reduce anxiety related to unmet expectations. In doing so, they can enhance tourists' overall satisfaction. The reverse loss aversion detected in internal motivations represents an opportunity for managers to leverage self-realization for enhanced experiences. Recognizing that internal motivations, particularly those associated with self-realization, have a unique impact on customer satisfaction would help develop and promote experiences that align with the self-realization aspect of internal motivations. These actions could involve offering activities that encourage personal growth, learning, and a sense of achievement. Considering that only gains matter, companies should focus on offering exclusive programs that would allow individuals to pursue self-realization goals, thus creating a sense of exclusivity and personal fulfillment.

While the results provide valuable insights, we acknowledge some limitations associated with the study. In particular, we use a sample of spa tourists. Thus, other contexts should be explored to generalize these activity-specific results. Additionally, the study design is cross-sectional. As such, panel data would capture a more comprehensive understanding of the evolution of the relationship between motivations and satisfaction over time.

Drawing on this study's findings, several future research avenues can further enhance our understanding of tourism motivations and satisfaction, and related factors. Besides the alluded application of this analyses to other contexts to facilitate generalization and the use of longitudinal data, further research should delve deeper into the psychological mechanisms behind the intriguing finding on reverse loss aversion in internal motivations. Further exploration is needed for the underlying cognitive and emotional processes that contribute to explain reverse loss aversion in the context of internal motivations. This research would enhance our understanding of these mechanisms, which in turn would add depth to psychological theories related to motivation and decision-making. Internal motivations encompass a range of different factors. Thus, investigating the interplay between these factors and how they contribute to reverse loss aversion could offer a holistic view, which could lead to the development of refined models that would capture the complexity of internal motivations. To sum up, the finding of reverse loss aversion challenges traditional theories. Further research can refine existing models or even propose new theoretical frameworks. This development could contribute to the advancement of psychological theories related to motivation, decision-making, and satisfaction in the context of tourism.

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