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# EXAMINING THE FACTORS THAT CONTRIBUTE TO TOURISTS' OVERORDERING BEHAVIOR AT LUXURY RESTAURANTS: TOURISTS, SERVICE STAFF, AND FOOD WASTE

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The purpose of this research is to examine tourists' overordering behavior at luxury restaurants because more than a third of restaurants' food waste is associated with customers being unable to finish their food. In addition, this behavior can have negative implications for consumers' health. A total of 410 participants completed surveys that indicated how status consumption and the need for uniqueness can contribute to consumers' overordering attitude, which in turn can affect their overordering behavior. Furthermore, their attitude's influence on their overordering behavior is lower for consumers who are highly conscious of their health than for those who are less conscious of their health. However, through advice giving, service staff can reduce diners' overordering behavior. Based on the findings, luxury restaurants that are popular among tourists might want to consider developing more tasting menus and providing further training to their staff to enhance tourists' dining experiences by helping them order a suitable number of dishes.

**Key words: Luxury restaurant; Food waste; Overordering behavior; Health consciousness; Value–attitude–behavior model**

## Introduction

Food waste is a global challenge for multiple stakeholders and can have profound impacts on the natural environment, society, and economy (UN Environment Programme, 2021; Wang et al., 2021). Estimates suggest that approximately 10% of global greenhouse gas emissions are related to unconsumed food, while more than 800 million people were affected by hunger in 2021 (Dwyer, 2023; Weber et al., 2020). Coşkun and Özbük's (2020) study indicated that restaurants are responsible for a portion of this food waste. This further suggests that diners' ordering behavior, such as ordering more food than they can consume, is a critical determinant of restaurant food waste. According to reports,

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more than a third of restaurant food waste is attributed to customers being unable to finish their meals (Belfast City Council, 2023; Filimonau et al., 2019; Matzembacher et al., 2020).

While there have been studies on consumers' food waste behavior at restaurants, opportunities for further research exist. The value–attitude–behavior model has been employed to explain consumers' dining behaviors (e.g., A. Chen & Peng, 2018; Peng, 2020). However, the focus has mainly been on their postconsumption behavior, such as intentions to revisit and to recommend. Only a limited number of studies have examined consumers' food waste behavior at restaurants, such as ordering more food than they can consume, by considering the influence of consumption values. Conceptualizing and testing a framework based on this established model to investigate the factors contributing to consumers' overordering behavior at restaurants, as well as potential variables that can mitigate this behavior, can be beneficial for the existing hospitality literature and the further development of the value–attitude–behavior model.

When studying consumers' food waste behavior at restaurants, examining consumers' tendency to overorder in luxury establishments can offer valuable insights to the literature and practices (Filimonau et al., 2023). Certain practices in luxury restaurants, such as the meticulous presentation of visually appealing dishes, may encourage customers to order more food than they can consume (A. Chen et al., 2015; Filimonau et al., 2023; Hyun et al., 2015; Mintel, 2014; Peng, 2020). Additionally, as luxury restaurants are exclusive and symbolize wealth and status for patrons (A. Chen et al., 2015), some consumers might be tempted to order more food and drinks than usual to showcase their status and wealth.

Among different types of customers' overordering behavior at restaurants, tourists' behavior might need additional investigation. Due to the hedonistic nature of tourism activity, consumers tend to exhibit less environmentally friendly and less healthy behavior when participating in this activity (Holmes et al., 2021). This tendency extends to their food consumption behavior as well. Studies have shown that consumers tend to waste more food, such as by overordering more food than they can consume, when traveling for tourism purposes (Filimonau et al., 2019; Gretzel et al., 2020; Wang et al., 2021). This behavior is sometimes unintentional, such as when they are unfamiliar with a restaurant's portion sizes, and at other times, it is intentional, driven by a desire to sample more dishes to avoid missing out on delicious-looking options.

Considering that luxury restaurants constitute the third largest sector within the global personal luxury product industry, the tourism industry has experienced significant recovery since the COVID-19 pandemic, and consumers tend to waste more food when traveling for tourism purposes, it is somewhat unexpected that little research has been done to investigate the factors contributing to tourists' overordering behavior when dining at luxury restaurants. For this reason, developing a framework to investigate this issue can have practical implications while contributing to the value–attitude–behavior model literature. A luxury restaurant is typically defined as one providing full table service and offering products (e.g., service, environment, and food) presented as unique, superior in quality, and conspicuous (Peng, 2020).

While some consumers might be tempted to overorder at luxury restaurants due to the perceived value of such establishments, various factors can potentially mitigate this behavior. Studies have shown that consumers in certain socioeconomic groups have become more health conscious, understanding the effects of excessive sugar consumption (Jin et al., 2016; Konar et al., 2022). Additionally, research has indicated that consumers in specific sociodemographic groups are increasingly concerned about the environmental impact of their consumption behavior (Wilson, 2021). In the literature, individuals' concerns for both their health and the natural environment are recognized as important factors influencing behavior (M.-F. Chen, 2011; Filimonau et al., 2020; Hamerman et al., 2018; Lo et al., 2017; Zeng et al., 2021).

Furthermore, there are benefits for luxury restaurants and service staff in assisting customers in avoiding overordering. If a customer overeats due to overordering, it can lead to unpleasant experiences for their body, such as heartburn, acid reflux, and stomach pain (Blackburn, 2018; Cleveland Clinic, 2023; Sharma et al., 2021; Tam et al., 2020). This can be counterproductive to luxury restaurants' efforts to provide customers with superior experiences and can negatively impact diners' tipping behavior, which is partially based on staff

suggestions (A. Chen & Peng, 2018; A. Chen et al., 2015; Whaley et al., 2019). Some service staff might be tempted to remind diners when they overorder (Wilson, 2021).

Based on the discussion above, there are factors that might contribute to tourists' overordering behavior at luxury restaurants. In addition, there are also factors that can mitigate this behavior. However, the effects of these factors have not been fully conceptualized and explored. To contribute to existing theoretical framework and practices, we propose a framework based on the value–attitude–behavior model to examine tourists' overordering behavior in luxury restaurants. Through testing this framework, our research will investigate the antecedents of tourists' overordering behavior, explore the impact of service staff interventions (i.e., advice-giving frequency) on tourists' overordering behavior, and assess the moderating effects of health consciousness and environmental consciousness on the relationship between attitudes toward overordering and actual overordering behavior. Finally, we will discuss the implications of this research.

## Overarching Model, Research Framework, and Definitions

### *Value–Attitude–Behavior Model*

The value–attitude–behavior model is the basis for our overarching theory in this research. The value–attitude–behavior model was originally proposed by Homer and Kahle (M. J. Kim et al., 2021; Liu et al., 2021). These authors suggest that the influence of values on specific behaviors is mediated by individuals' attitudes toward such behaviors. The concept of values refers to a person's conviction that a particular behavior or conduct is preferable (Liu et al., 2021). Attitude refers to individuals' evaluation of a behavior or conduct as positive or negative (M. J. Kim et al., 2021). Behavior can be described as the actual decisions and actions that individuals take (M. J. Kim et al., 2021).

This model is rooted in the field of social psychology (A. Chen & Peng, 2018) but has been applied to the field of tourism studies and hospitality research (e.g., Han et al., 2019; Kang et al., 2015; Rousta & Jamshidi, 2019). In addition, it has been applied to examine consumption behavior related to luxury products, lifestyle, and sustainability (e.g., A. Chen & Peng, 2018; Cheung & To, 2019; Kang et al., 2015). Such studies have generally supported the notion that value can serve as a predictor of individuals' attitudes toward a given behavior, which, in turn, can affect their behavioral intentions.

When applying the value–attitude–behavior model to luxury product consumption scenarios, A. Chen and Peng (2018) have suggested that researchers use values that can reflect the characteristics of luxury products. This is because luxury products tend to have a premium quality, recognizable style, and high hedonic value, in addition to an increased cost compared to nonluxury products (Berthon et al., 2009). Because of the characteristics of luxury products, researchers have noted that the need for uniqueness, self-presentation motives, and status consumption are three important values that can affect individuals' luxury product consumption attitudes and behaviors (W. E. Jang et al., 2015; H. Shin et al., 2017; Yang & Mattila, 2016). However, there are a limited number of studies examining luxury service consumption in relation to the influence of these luxury values. This could be considered a gap in the literature, and it may be necessary to further investigate concepts and results previously established through the study of luxury goods. This is particularly relevant due to the distinctive characteristics of luxury services, including their perishability, intangibility, and variability.

The need for uniqueness, self-presentation motives, and status consumption can be applicable and significant in the context of this research. Previous studies have shown that diners use luxury restaurants as a means to present themselves to others, fulfill their need for uniqueness, and display their status (A. Chen & Peng, 2018; A. Chen et al., 2015; Yang & Mattila, 2016). Status consumption, in this research, can thus be defined as consumption by diners who desire restaurants that have visible social status (Chao & Schor, 1998). The need for uniqueness indicates consumers' need to differentiate themselves from others through the restaurants they visit (Zhan & He, 2012). In this research, self-presentation motives can be defined as consumers' manipulation of signs and/or representation of self through their choice of restaurant (K. Kim et al., 2012).

Regarding the consequences of the need for uniqueness, self-presentation motives, and status

consumption, this research focuses on consumers' attitudes toward overordering, which measures the degree to which a diner has a favorable or unfavorable evaluation or appraisal of overordering food and drinks at luxury restaurants (A. Chen & Peng, 2018). Furthermore, this study examines attitude's effect on diners' overordering behavior. One gap in studies using the value–attitude–behavior model is their tendency to concentrate on behavioral intentions rather than actual behavior (A. Chen & Peng, 2018; Peng & Chen, 2021). While intentions can predict actual behavior, they are not identical. This research aims to contribute to the value–attitude–behavior model literature by examining tourists' overordering behavior. Here, overordering behavior is defined as ordering an overabundance or a large variety of food and drinks at luxury restaurants that is more than necessary or can be consumed (Yu et al., 2021). The value–attitude–behavior model has been applied in different marketing and hospitality contexts, but its ability to predict individuals' overordering behavior at luxury restaurants remains to be examined.

### *Advice-Giving Frequency, Health Consciousness, and Environment Consciousness*

In addition to attitude's influence on overordering behavior, we also examine the effect of service staff's advice-giving frequency on overordering behavior. As mentioned by Seiders et al. (2015), professional advice can have a crucial impact on consumers' service-based product buying decisions. Service providers also generally want to help customers reach positive outcomes, such as better health, through their advice; however, negative outcomes might occur when consumers do not adhere to expert advice (K. W. Chan et al., 2010). The concept of advice-giving is therefore applicable to hospitality services because service staff at luxury restaurants have the opportunity to interact with and provide expert advice to customers throughout their visit—for example, by answering customers' questions about how to select wine or suggesting taking leftovers home (A. Chen et al., 2015; Hamerman et al., 2018). Furthermore, restaurant staff sometimes advise diners about their restaurant's menu and dish portions to assist their customers in having a positive experience while avoiding overordering (Peng et al., 2017; Yu et al., 2021).

Based on a review of the relevant literature, few tourism and hospitality studies have investigated the influence of service staff despite their important role during service encounters. To contribute to the literature, we thus incorporate an "advice-giving frequency" variable into our proposed value–attitude–behavior model. We define advice-giving frequency as the incidence of restaurant service staff–diner interactions in which advice about what diners might have overordered is provided (Seiders et al., 2015).

Apart from the above variables mentioned above, our framework considers the effect of "health consciousness" and "environment consciousness." Existing studies on sustainability and food consumption have mentioned that consumers' food wastage behavior can be affected by their concern for their own health and the natural environment (M.-F. Chen, 2011; Lo et al., 2017; Martínez García de Leaniz et al., 2018; Y. H. Shin et al., 2019; Zeng et al., 2021). Hence, health consciousness is relevant to the present research because purchasing an excessive amount of food could have negative health implications, as consumers tend to eat more when they buy more food (Sharma et al., 2021). In addition, overordering food can lead to food wastage, which can have a negative impact on the environment (Filimonau & De Coteau, 2019; Talwar et al., 2021; Tonini et al., 2018).

Researchers have explored the direct effects of these two variables on the behavior of luxury product consumers; however, their potential to moderate the behavior of tourists in a luxury restaurant setting remains unexplored. In this study, health consciousness refers to the degree to which a person plays an active role in maintaining his or her health (Zeng et al., 2021). Environmental consciousness measures the degree to which individuals are concerned about environmental problems and willingness to make an attempt to solve them (Martínez García de Leaniz et al., 2018).

## Hypotheses

Based on the literature we reviewed and the objectives of this study, a research framework for the study is proposed, as illustrated in Figure 1. Our first hypothesis proposes that consumers' self-presentation motives have a positive effect on their attitude toward overordering luxury restaurants. Products, including luxury products, can be

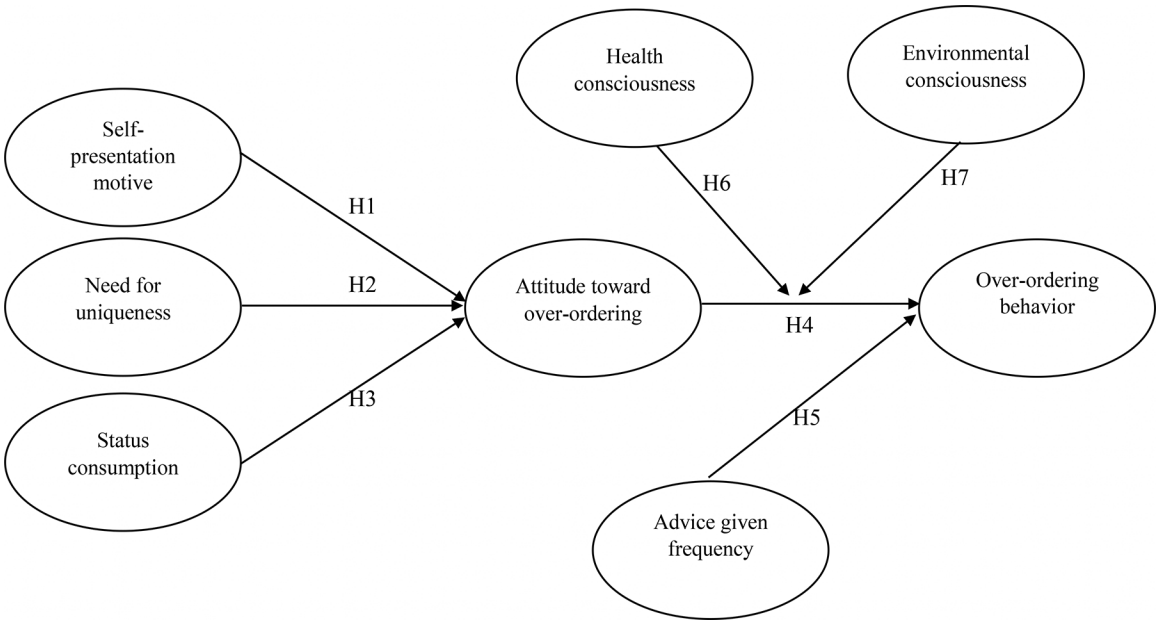


*Figure 1.* Research framework and hypotheses.

used to present consumers' self-image (Hosany & Martin, 2012; H. Shin et al., 2017). In hospitality studies, researchers have confirmed that consumers also use restaurants that they visit and the food that they order as a way to present themselves (Peng & Chen, 2021). For example, consumers present themselves as being healthy, having better taste, and being more ethical by buying organic food (Hwang, 2016). A. Chen and Peng (2018) confirmed that restaurants' ability to let diners express themselves can positively influence their attitude toward restaurants. Accordingly, we hypothesize that consumers who like to be seen visiting luxury restaurants are more likely to find overordering food at these establishments to be a wise idea (H1). In this research, tourism activities are defined as activities that individuals undertake for themselves that are outside their normal routine and that are undertaken for the purpose of enjoyment (Cohen, 1979; Peng et al., 2014):

**H1:** Consumers' self-presentation motives have a positive influence on their attitude toward overordering at luxury restaurants when participating in tourism activities.

The second hypothesis of this research concerns the influence of need for uniqueness on consumers' attitudes toward overordering luxury restaurants. Some consumers, including tourists, are particularly prone to purchasing products and visiting destinations that make them feel unique and distinctive (Kauppinen-Räisänen et al., 2018). Similar to some luxury brands, luxury restaurants can use multiple methods to make consumers feel unique, such as well-designed dining areas, exquisite ingredients, and visually appealing plate displays (Berthon et al., 2009; A. Chen et al., 2015; Peng, 2020; Peng et al., 2017). These methods may stimulate tourists to want to order more food than they can consume if they miss out on dishes that appear to be aesthetically appealing and delicious looking (A. Chen et al., 2015; Filimonau et al., 2023; Hyun et al., 2015; Mintel, 2014; Peng, 2020). Kauppinen-Räisänen et al. (2018) confirmed that consumers' need for uniqueness can affect their attitudes toward luxury brands. Accordingly, we hypothesize that consumers who like to visit restaurants that are unique are more likely to have a positive attitude toward overordering food while visiting these establishments (H2):

**H2:** Consumers' need for uniqueness tendencies have a positive influence on their attitude toward overordering luxury restaurants when participating in tourism activities.

The third hypothesis that we test concerns status consumption's influence on consumers' attitudes toward overordering food and drinks at luxury restaurants when participating in tourism activities. Researchers have suggested that some consumers purchase products that will give them status (W. Y. Chan et al., 2015; Pino et al., 2019). In addition, studies have shown that luxury restaurants and hotels can be suitable products for demonstrating consumers' status, such as their social standing or wealth (Peng & Chen, 2019; Yang & Mattila, 2016). Luxury restaurants often offer conspicuous ornaments, luxurious decorations, and expensive food and drinks for their customers to consume (A. Chen & Peng, 2018; A. Chen et al., 2015). In the context of tourists' dining behaviors, research has shown that there is a positive relationship between status consumption and attitudes (A. Chen & Peng, 2018; Choe & Kim, 2018). Building on the works of these aforementioned authors, we therefore propose that consumers who visit a restaurant mainly because it has status are more likely to have positive attitudes toward ordering excessive amounts of food and drinks while visiting luxury restaurants (H3):

**H3:** Consumers' status consumption tendencies have a positive influence on their attitude toward overordering at luxury restaurants when participating in tourism activities.

The fourth hypothesis that we test in this research concerns attitudes toward overordering at luxury restaurants' influence on consumers' overordering behavior. The relationship between attitude and behavioral intentions and behavior has been examined in numerous different consumption scenarios, such as healthy eating behavior and online group buying behavior (Cheng & Huang, 2013; Jun & Arendt, 2016). In previous tourism and hospitality studies, consumers' attitudes toward certain activities (e.g., dining when traveling abroad and overordering at restaurants) have also been a significant indicator of their behavioral intentions and behavior (A. Chen & Peng, 2018; Yu et al., 2021). Yu et al.'s (2021) study confirmed that diners who feel it is wise to overorder at restaurants when entertaining guests are more likely to have stronger intentions to overorder food and drinks. Hence, we extend this literature by hypothesizing that consumers' attitudes on overordering will positively affect their overordering behavior at luxury restaurants (H4):

**H4:** Consumers' attitudes toward overordering at luxury restaurants have a positive influence on their overordering behavior.

The fifth hypothesis that we examine in this research is advice-giving frequency's influence on restaurant diners' overordering behavior. The relationship between advice-giving frequency and behavior has been supported in studies of multiple service encounter situations, such as medical, legal, and financial services (Seiders et al., 2015). Few studies, however, have explored this relationship in the restaurant context, even though restaurant staff can provide expert advice-giving on food and dining-related issues and have multiple opportunities to interact with diners (A. Chen et al., 2015; Yu et al., 2021). Yu et al.'s (2021) research has confirmed that diners' overordering behavior while entertaining guests can be reduced through staff intervention, measured by a one-item situational variable. To extend the literature on restaurant and service encounter management, we thus propose that consumers' overordering behavior can be affected by luxury restaurant staff's advice-giving frequency, which we measure with multiple items (H5):

**H5:** Restaurant staff advice-giving frequency has a negative influence on consumers' overordering behavior.

The sixth hypothesis that we examine is diners' health consciousness's ability to moderate their attitude toward overordering's influence on their overordering behavior. Studies have shown that individuals' consciousness about their health can influence their food consumption attitudes and behaviors (Nagaraj, 2021; J. Shin & Mattila, 2019; Yu et al., 2021; Zeng et al., 2021). For example, a food package's social value affects consumers' food wastage intentions differently based on their level of health consciousness (Zeng et al., 2021).

Additionally, M.-F. Chen (2011) proposed that health consciousness can moderate the relationship between attitudes and behavioral intentions regarding functional food.

Luxury restaurant diners might overorder food and drinks if they have positive attitudes toward this behavior. This could be for different reasons, such as entertaining guests and/or restaurants offering too many exciting dishes (Batat, 2021; Jin et al., 2016; Ospina, 2018; Yu et al., 2021). However, we propose that attitude's effect on behavior might be less significant for consumers who are highly conscious about their health than for those who are less conscious about their health (M.-F. Chen, 2011). The following hypothesis (H6) is therefore tested:

**H6:** Attitudes toward overordering have a weaker positive effect on overordering behavior for consumers with higher health consciousness than for consumers with lower health consciousness.

The seventh hypothesis that we test is environmental consciousness's ability to moderate attitude toward overordering's effect on diners' overordering behavior. Research has shown that consumers' environmental consciousness, such as their concern for environmental problems, can influence their food/restaurant-related consumption attitude and behavior (Ghvanidze et al., 2016; S. Kim & Seock, 2009; Remar et al., 2022). For example, Remar et al. (2022) proposed that environmental consciousness can affect consumers' perception of restaurants' image. In addition, Y. J. Jang et al.'s (2015) study has confirmed that consumers' coffee consumption behavior can be differentiated by their levels of environmental consciousness.

There could be various reasons why luxury restaurant consumers might overorder food and drinks if they have positive attitudes toward this behavior. For example, some might feel that it is a method of presenting themselves and/or that it is acceptable to be conspicuous when visiting luxury restaurants (A. Chen & Peng, 2018; Peng, 2020). Nevertheless, we propose that attitude's effect on behavior might be less significant for consumers who are highly concerned about environmental problems than for those who are less concerned about environmental problems. The following hypothesis (H7) is thus tested:

**H7:** Attitudes toward overordering have a weaker positive effect on overordering behavior for consumers with higher environmental consciousness than for consumers with lower environmental consciousness.

## Research Methodology

### *Sampling and Data Collection Methods*

Taiwanese tourists were recruited to test the proposed hypotheses because they have been shown to be passionate about dining at luxury restaurants when participating in tourism activities (A. Chen & Peng, 2018; A. Chen et al., 2015). In Kaohsiung City, Taichung City, New Taipei City, and Taipei City, trained assistants politely approached individuals who were about to enter or leave a luxury restaurant. The sampling method used to collect these data was a nonprobability purposive sampling method. This technique was used to increase the likelihood of reaching individuals who met the screening criteria. The screening criteria for this research were as follows: 1) participants had to be over 18 years old, 2) they had to have dined at luxury restaurants for tourism purposes before, and 3) they had to have been reminded by luxury restaurant service staff about overordering while participating in tourism activities before (Peng & Chen, 2019).

The background of the study was provided to the consumers who agreed to take part and met the screening criteria. To ensure that participants were aware of the research context, the characteristics of luxury restaurants and examples of luxury restaurants were provided to the respondents before they started to fill out the survey (A. Chen & Peng, 2018; Yang & Mattila, 2016). The self-report method was used to survey participants' dining behavior. The research assistants thanked the respondents and debriefed them once the surveys were completed. While conducting this research, the authors followed their home institutions' research ethics guidelines. Seventy-five percent of the returned surveys were usable. A total of 410 questionnaires were gathered during the 10-week data collection period. The profile of the participants is presented in Table 1.

Table 1
Characteristics of the Participants ($N = 410$)

| Variables | % |
|---|---|
| **Gender** | |
| Male | 46.8% |
| Female | 53.2% |
| **Respondent's age** | |
| 18–30 years old | 13.2% |
| 31–40 years old | 25.6% |
| 41–50 years old | 33.6% |
| 51–60 years old | 18.8% |
| 61 and above | 8.8% |
| **Education** | |
| High school degree | 16.1% |
| College degree | 19.8% |
| Undergraduate | 43.6% |
| Postgraduate degree or above | 20.5% |

### *Survey Design*

The study participants completed a questionnaire that had two sections. The first part collected information regarding participants' demographic backgrounds. In addition, their dining behavior was surveyed. The second part had 34 statements about health consciousness (Lo et al., 2017), need for uniqueness (H. Shin et al., 2017), environmental consciousness (Martínez García de Leaniz et al., 2018), status consumption (H. Shin et al., 2017), advice-giving frequency (Seiders et al., 2015), attitude toward overordering (Yu et al., 2021), self-presentation motives (H. Shin et al., 2017), and overordering behavior (Sharma et al., 2021). When preparing these questions, a 7-point Likert-type scale was used. The 34 statements used in this study can be found in Table 2.

## Data Analysis and Results

### *Model Measurement*

The software used to examine the collected data was IBM SPSS Statistics 25 and IBM SPSS AMOS 25. Structural equation modeling using Anderson and Gerbing's (1988) two-step approach (i.e., confirmatory factor analysis and structural equation modeling) was applied when analyzing the data. During the preliminary approach, confirmatory factor analysis (CFA) was performed. Four items (i.e., one from health consciousness, one from need for uniqueness, and two from environmental

Table 2
Measurement Items and CFA Results

| Variable/Adopted From/Measurement Items | Factor Loading | CR | AVE |
|---|---|---|---|
| **Health consciousness (HC)**/Lo et al. (2017) | | 0.96 | 0.84 |
| HC1: I am very self-conscious about my health. | 0.93 | | |
| HC2: I am usually aware of my health. | 0.95 | | |
| HC3: I take responsibility for the state of my health. | 0.96 | | |
| HC4: I am alert to change in my health. | 0.83 | | |
| *HC5: I am aware of the state of my health as I go through the day.* | | | |
| **Self-presentation motives (SM)**/Shin et al. (2017): When participating in tourism activities: | | 0.94 | 0.82 |
| SM1: I like to be seen visiting luxury restaurants. | 0.88 | | |
| SM2: Luxury restaurants help me fit into important social situations. | 0.95 | | |
| SM3: Luxury restaurants are a symbol of social status. | 0.93 | | |
| SM4: I enjoy it when people know I am visiting luxury restaurants. | 0.85 | | |

(*continued*)

Table 2 (Continued)

| Variable/Adopted From/Measurement Items | Factor Loading | CR | AVE |
|---|---|---|---|
| **Need for uniqueness (NU)**/Shin et al. (2017) | | 0.95 | 0.87 |
| *NU1: When a luxury restaurant I visited before while participating in tourism activities becomes popular among the general population, I revisit it less often.* | | | |
| NU2: When participating in tourism activities, I often try to avoid luxury restaurants that I know are visited by the general population. | 0.95 | | |
| NU3: As a rule, when participating in tourism activities, I dislike luxury restaurants that are customarily visited by everyone. | 0.92 | | |
| NU4: When participating in tourism activities, the more commonplace a luxury restaurant is among the general population, the less interested I am in visiting it. | 0.94 | | |
| **Status consumption (SC)**/Shin et al. (2017): When participating in tourism activities: | | 0.96 | 0.89 |
| SC1: I would visit a luxury restaurant just because it has status. | 0.95 | | |
| SC2: I am interested in visiting new luxury restaurant with status. | 0.94 | | |
| SC3: I would pay more to visit a luxury restaurant if it had status. | 0.94 | | |
| **Environmental consciousness (EC)**/Martínez García de Leaniz et al. (2018) | | 0.93 | 0.68 |
| EC1: I feel frustrated when I think of companies that carry out their business activities by polluting the environment. | 0.86 | | |
| *EC2: When two companies are similar, I tend to select the one that harms the environment less, even if it is more expensive.* | | | |
| EC3: If the services provided by a company seriously damage the environment, I will refuse to purchase them. | 0.85 | | |
| *EC4: When choosing a service provider, I always select the one with environmental certification, even if it is more expensive.* | | | |
| EC5: I regularly recycle at home. | 0.88 | | |
| EC6: I often purchase products that use less paper or cardboard for packaging. | 0.85 | | |
| EC7: I am conscious about the actions I can take to improve the environment. | 0.77 | | |
| EC8: I am usually informed about environmental issues. | 0.72 | | |
| **Advice giving frequency (AGF)**/Seiders et al. (2015): When participating in tourism activities: | | 0.93 | 0.81 |
| AGF1: The service staff in luxury restaurant has often mentioned to me that I have ordered too much food. | 0.92 | | |
| AGF2: The service staff in luxury restaurant has often mentioned to me that I have ordered too many dishes. | 0.90 | | |
| AGF3: The service staff in luxury restaurant has often mentioned to me that I have ordered more than enough for my table. | 0.88 | | |
| **Attitude towards over-ordering (ATT)**/Yu et al. (2021): When participating in tourism activities: | | 0.88 | 0.72 |
| ATT1: Excessively order food in a luxury restaurant is bad/good.[a] | 0.85 | | |
| ATT2: Excessively order food in a luxury restaurant is foolish/wise.[a] | 0.84 | | |
| ATT3: Excessively order food in a restaurant is unpleasant/pleasant.[a] | 0.85 | | |
| **Overordering behavior (OB)**/Sharma et al. (2021): While participating in tourism activities: | | 0.95 | 0.84 |
| OB1: I often order unintended dishes when visiting luxury restaurants. | 0.93 | | |
| OB2: I often order too much food when visiting luxury restaurants. | 0.92 | | |
| OB3: I usually order more food than required if luxury restaurants offer good value for money. | 0.90 | | |
| OB4: I order more perishable dishes (e.g., salad) when visiting luxury restaurants. | 0.91 | | |

*Note*. CR, composite reliability; AVE, average variance extracted. Questions in italics were eliminated due to low factor loading. [a]A series of seven semantic differential scales was used.

Table 3
Correlations and Descriptive Statistics

| | Mean | *SD* | CrA | SM | NU | SC | OB | AFG | ATT |
|---|---|---|---|---|---|---|---|---|---|
| SM | 4.77 | 1.10 | 0.91 | **0.91** | | | | | |
| NU | 4.96 | 1.07 | 0.94 | 0.91 | **0.93** | | | | |
| SC | 5.02 | 1.10 | 0.94 | 0.84 | 0.73 | **0.94** | | | |
| OB | 5.45 | 0.90 | 0.92 | 0.66 | 0.61 | 0.71 | **0.92** | | |
| AFG | 4.23 | 0.96 | 0.92 | 0.80 | 0.74 | 0.73 | −0.67 | **0.90** | |
| ATT | 4.18 | 0.93 | 0.80 | 0.76 | 0.65 | 0.67 | 0.63 | −0.71 | **0.85** |

*Note*. Bold numbers on the diagonal elements are square root of each construct's AVE value. CrA, Cronbach's alpha; SM, self-presentation motives; NU, need for uniqueness; SC, status consumption; ATT, attitude towards overordering; OB, overordering behavior; AFG, advice given frequency.

Table 4
Hypotheses Tests (H1–H5)

| Path | Standard Estimate (β) | *t* Value | Results |
|---|---|---|---|
| H1: SM → ATT | 0.81 | 1.66 | Not support |
| H2: NU → ATT | 0.62 | 2.07* | Support |
| H3: SC → ATT | 0.43 | 4.79*** | Support |
| H4: ATT → OB | 0.15 | 1.96* | Support |
| H5: AFG → OB | −0.90 | −6.92*** | Support |

*Note*. SM, self-presentation motives; NU, need for uniqueness; SC, status consumption; ATT, attitude towards overordering; OB, overordering behavior; AFG, advice given frequency.
*$p < 0.05$, ***$p < 0.001$.

consciousness) were removed due to low factor loading. After discarding the items mentioned above, the factor loading of the remaining items exceeded Fornell and Larcker's (1981) recommended threshold of 0.7. Moreover, the reliability of this research's measurement items was supported by squared multiple correlations. The composite reliability scores, shown in Table 3, were within the range of 0.88 and 0.94 and above Hair et al.'s (2012) recommended threshold of 0.7. The average variance extracted (AVE) of each construct was above 0.5, which shows convergent validity. Furthermore, shared variance between pairs of constructs was less than the AVE of each variable, which demonstrates discriminant validity (Fornell & Larcker, 1981). The goodness of fit of the model was confirmed ($\chi^2/df$ = 2.80; RMSEA = 0.068; CFI = 0.956; GFI = 0.953; NFI = 0.955); therefore, the measurement model was acceptable.

Because the participants in this study completed their questionnaires at the same time, common method variance (CMV) is a potential issue of concern. To rule out its influences, the common latent factor (CLF) method was used (Podsakoff et al., 2003). The differences between the regression weights with and without the latent variable were similar (<0.20), indicating that this study was not significantly affected by common method bias.

### *Hypothesis Testing (H1–H5)*

Once the measurement model was validated, the structural model was estimated to examine the hypotheses. The results showed that the proposed model fits the data reasonably well ($\chi^2/df$ = 2.94; RMSEA = 0.073; CFI = 0.902; GFI = 0.944; NFI = 0.947). After the structural model was examined, the proposed relationships were tested. H1 was not supported ($t = -0.166$; $\beta = -0.81$; $p > 0.05$) because self-presentation motives did not have a positive impact on attitude toward overordering. H2, however, was supported ($t$ = 2.07; $\beta$ = 0.62; $p < 0.05$), as the need for uniqueness had a significant impact on attitude toward overordering. H3 was also supported ($t$ = 4.79; $\beta$ = 0.43; $p < 0.001$); status consumption had a positive and significant impact on attitude toward overordering. H4 was supported ($t$ = 1.96; $\beta$ = 0.15; $p < 0.05$) because attitude toward overordering had a positive impact on overordering behavior. H5 was supported ($t = -6.92$; $\beta = -0.90$; $p < 0.001$) because the advice provided by restaurant service staff had a negative and significant impact on diners' overordering behavior. A summary of the hypothesis testing results (H1–H5) is provided in Table 4.

### *Moderating Effects of Health Consciousness (H6) and Environmental Consciousness (H7)*

Using two groups classified by degree of health consciousness, a multiple group analysis was conducted to test whether health consciousness changes the relationship between attitude toward overordering and overordering behavior (H6). Before the analysis, the participants of this research were separated into two groups using the mean split. The mean respondent health consciousness score was 5.13. Thus, those with mean scores greater than

Table 5
Health Consciousness's Moderating Effect (H6)

| Path Estimated | Low Health Consciousness Group β (*t*) | High Health Consciousness Group β (*t*) | $\Delta\chi^2$, $\Delta df = 1$ | Moderating Effect |
|---|---|---|---|---|
| ATT → OB | 0.19 (2.54)** | 0.07 (1.90) | 54.36*** | Significant |

*Note*. ATT, attitude towards over-ordering; OB, overordering behavior.
**$p < 0.01$, ***$p < 0.001$.

5.13 were placed into the high health consciousness group ($N = 224$), and those with mean scores below 5.13 were placed into the low health consciousness group ($N = 186$).

First, by examining the chi-square difference between the unconstrained and constrained models, we found that there was a significant difference between the high health consciousness group and the low health consciousness group for outcomes related to overordering behavior ($\Delta\chi^2 = 28.33$, $\Delta df = 14$, $p < 0.01$). Second, because the difference in the regression coefficients between the unconstrained and constrained models was significant ($\Delta\chi^2 = 54.36$, $\Delta df = 1$, $p < 0.001$), we found that health consciousness played a moderating role in the hypothesized path (i.e., attitude toward overordering's effect on overordering behavior). Attitudes toward overordering significantly impacted overordering behavior only for participants who had low levels of health consciousness. Based on these statistical test results, H6 was supported (Table 5).

To investigate the moderating effect of environmental consciousness (H7), another multiple group analysis was conducted. The mean respondent environmental consciousness score was 5.30. For this reason, those with mean scores greater than 5.30 were classified into the high environmental consciousness group ($N = 222$), and those with mean scores below 5.30 were classified into the low environmental consciousness group ($N = 188$). By examining the chi-square difference between the unconstrained and constrained models, we suggested that there is a significant difference between the high environmental consciousness group and the low environmental consciousness group for outcomes related to overordering behavior ($\Delta\chi^2 = 20.87$, $\Delta df = 14$, $p < 0.01$). However, further tests illustrated that the difference in the regression coefficients between the unconstrained and constrained models was not significant ($\Delta\chi^2 = 2.14$, $\Delta df = 1$, $p > 0.05$). In other words, environmental consciousness did not have the ability to moderate attitude toward overordering's effect on overordering behavior at the path level. H7 was not supported (Table 6). Figure 2 shows the hypothesis testing results (H1–H7).

## Discussion and Implications

### *General Discussion*

Approximately 10% of global greenhouse gas emissions are associated with unconsumed food (Weber et al., 2020). Furthermore, over a third of restaurant food waste can be attributed to customers' inability to finish their meals (Dwyer, 2023; Filimonau et al., 2019; Matzembacher et al., 2020). While some research has examined diners'

Table 6
Environmental Consciousness's Moderating Effect (H7)

| Path Estimated | Low Environmental Consciousness Group β (*t*) | High Environmental Consciousness Group β (*t*) | $\Delta\chi^2$, $\Delta df = 1$ | Moderating Effect |
|---|---|---|---|---|
| ATT → OB | 0.24 (2.91)** | 0.09 (2.01)** | 2.14 | Not significant |

*Note*. ATT, attitude towards over-ordering; OB, overordering behavior.
**$p < 0.01$.

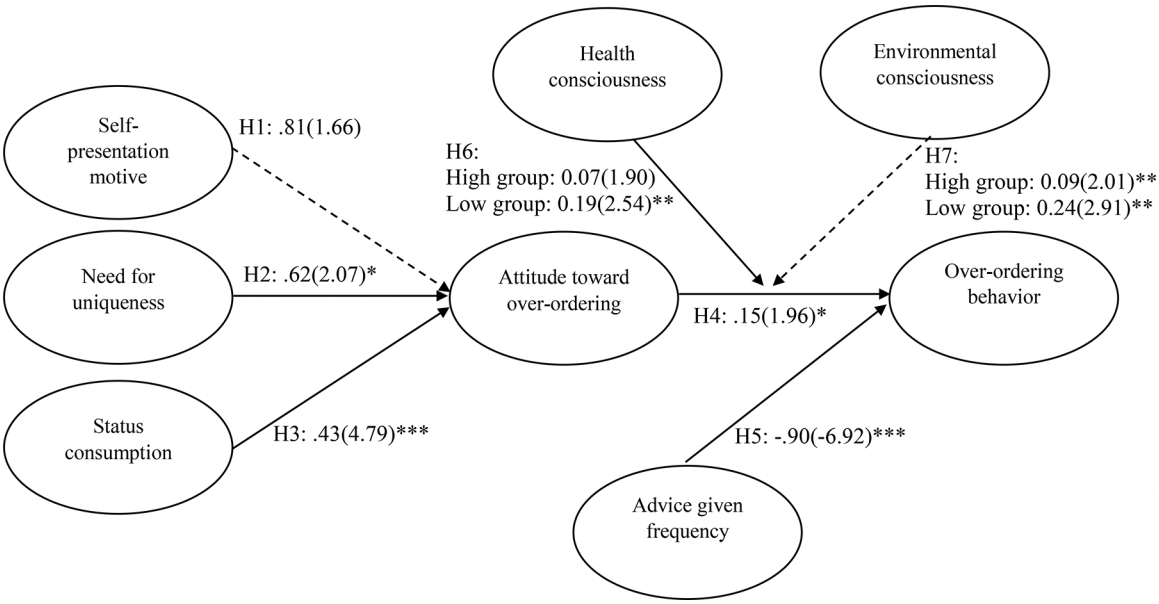


*Figure 2.* Results.

overordering behavior, there are still gaps in the literature. Specifically, only a handful of studies have explored consumers' dining behavior during tourism activities, and there is limited research on diners' actual overordering behavior in luxury restaurants. This study provides two unique contributions to the literature by investigating tourists' tendency to overorder luxury restaurants through the value–attitude–behavior model.

First, due to the overemphasis on quality and aesthetics in some luxury restaurants, a significant amount of food waste has been observed in these establishments (Filimonau et al., 2023; Wang et al., 2021). However, despite being the third largest global personal luxury product sector and experiencing significant recovery since the COVID-19 pandemic (D'Arpizio et al., 2021), few studies have examined the issue of food waste in luxury restaurants. Based on the findings of this study, some aspects of luxury restaurants, such as their ability to highlight customers' status and provide unique experiences, may contribute to diners' tendencies to overorder. However, when compared with other types of restaurants (e.g., buffet restaurants), luxury restaurants and their staff are arguably better positioned to assist customers in ordering an appropriate amount of food. This is because diners in luxury restaurants tend to value the opinions of service staff, and the potential negative consequences of overordering, such as heartburn and stomach pain, can be counterproductive to the efforts of luxury restaurants to provide customers with superior experiences.

Second, studies have shown that consumers tend to engage in less environmentally friendly and less healthy behavior when participating in tourism activities (Holmes et al., 2021). Nevertheless, the literature has not fully explored tourists' behavior in this context, despite the rapid rebound of the tourism industry following the lifting of COVID-19-related restrictions. Based on the results of this study, the tendency to exhibit less environmental friendliness when traveling also applies, to some extent, to tourists dining at luxury restaurants. Due to the hedonistic nature of tourism activities and the appeal of luxury restaurants, tourists may inadvertently or intentionally order more food than they can consume. This could be due to their unfamiliarity with portion sizes of different dishes or their desire to sample as many delicious items as possible. Consumers' concerns for the natural environment will not be able to mitigate their overordering behavior when they dine at luxury restaurants when traveling. However, this behavior can be mitigated

if tourists are highly health conscious. In the following section, we provide a more detailed discussion of the research framework and hypotheses.

*Implications for Theory*

In the hospitality literature, few studies have conceptualized a framework based on an established model to examine consumers' restaurant overordering behavior. Moreover, studies investigating the factors that can mitigate an individual's behavior have been limited. To support the investigation in this research, the value–attitude–behavior model was adopted as the overarching framework. This model could provide valuable insights into consumers' overordering behaviors, but it has mainly been employed to examine diners' postconsumption behavior, such as intentions to revisit and to recommend. More importantly, this study makes a theoretical contribution to the existing body of knowledge by testing potential factors that can moderate this behavior (i.e., health consciousness and environmental consciousness), examining the direct effect of staff advice on behavior, and identifying consumption values (i.e. need for uniqueness, self-presentation motives, and status consumption) suitable for examining overordering behavior at luxury restaurants. These implications will be further elaborated.

First, the findings of this study are generally consistent with the value–attitude–behavior model, where luxury consumption values (i.e., need for uniqueness and status consumption) can affect tourists' attitudes toward overordering luxury restaurants, which, in turn, can lead to their actual behavior. These results reconfirm that consumers who emphasize the ability of luxury products to signify their status, wealth, and desire to be different from the general population are not only more interested in buying luxury products but also more likely to have a positive attitude toward overconsumption (Chen & Peng, 2018; Shin et al., 2017). Furthermore, in previous hospitality studies using the value–attitude–behavior model, some researchers focused on behavioral intentions rather than actual behavior. This research contributes to the theoretical framework by emphasizing actual overordering behavior. While intentions can predict actual behavior, they are not different variables. Interestingly, self-presentation cannot significantly affect consumers' attitudes toward overorders. Overeating might have some impact on an individual's physical features, such as changes in weight and impacts on the aging process (Tam et al., 2020). It is thus possible that consumers who have a strong desire to use luxury restaurants to present themselves might not have a positive attitude toward overordering if they have a strong desire to present themselves.

Second, although the value–attitude–behavior model is well established, fewer studies have explored the factors that can moderate an individual's behavior. This study makes a theoretical contribution to this model by examining the ability of health consciousness and environmental consciousness to moderate the influence of attitude on behavior. In the literature on food consumption behavior, individuals' concerns for their health and the natural environment are important factors that can affect consumers' behavior (M.-F. Chen, 2011; Filimonau et al., 2020; Hamerman et al., 2018; Lo et al., 2017; Zeng et al., 2021). This research thus confirms that consumers' concern for their health can moderate their attitude toward overordering's effect on their overordering behavior. In other words, although they might feel that overordering at luxury restaurants is good, consumers who are highly aware of their health and changes in their health do not let this attitude affect their food ordering behavior. As some consumers are more conscious about their health than before (Jin et al., 2016; Konar et al., 2022), our findings might have additional importance for hospitality research and health-related studies, as previous studies on health consciousness have mainly focused on this factor's direct effect on behavior.

Contrary to our hypothesis, we have found that although more consumers are concerned about their consumption behavior's impact on the natural environment (Wilson, 2021), this concern does not moderate the relationship between attitude toward overordering and overordering behavior significantly. The hedonistic nature of tourism activities entails that many luxury restaurants use multiple methods, including a diverse range of delicious foods, to ensure that their customers have positive experiences, which might cause consumers to have a positive attitude toward overordering food at restaurants, regardless of their concern for the natural environment.

Third, a distinctive theoretical contribution of this research is confirming the impact of advice-giving frequency on behavior in the value–attitude–behavior model. Moreover, this study stands out as one of the few in hospitality research that explores the role of service staff in influencing food waste in luxury restaurants. Similar to expert advice that is provided by medical, legal, and financial professionals (Seiders et al., 2015), consumers' overordering behavior at luxury restaurants can be reduced by the advice provided by service staff. One explanation for this is that luxury restaurants' menu and wine list can be quite extensive; therefore, tourists perceive their service staff to be experts regarding ordering food and drinks. In addition, dining at luxury restaurants can be an expensive consumption behavior (Peng & Chen, 2019; Peng et al., 2017). Hence, diners might worry about making the wrong choice, similar to their reasons for seeking other kinds of professional advice. It is also possible that tourists are willing to adhere to service staff's advice because they are in a less familiar environment (Peng & Chen, 2019). This result has implications for the service management literature, as it demonstrates that expert advice is applicable not only in medical, legal, and financial settings but also in situations where consumers perceive service staff to have valuable knowledge. Furthermore, this research also has implications for the hospitality literature, as few studies have examined service staff's influences on diners' ordering behavior.

### *Implications for Practices*

This research also has implications for individuals, luxury restaurant practitioners, and policy makers to consider. First, consumers who seek uniqueness through their consumption decisions or use consumption to signify their status tend to be the diners who overorder when visiting luxury restaurants while traveling. As more than a third of restaurant food waste is associated with customers being unable to finish their meals and reducing waste can lower the cost of waste removal (Belfast City Council, 2023; Dwyer, 2023; Filimonau et al., 2019; Matzembacher et al., 2020), it might also be in luxury restaurants' interest to find creative ways to help customers who seek uniqueness and status not overorder while maintaining similar profit margins and customer experiences.

Luxury restaurants might want to explore whether their dishes could come in different portion sizes (e.g., large and small) and whether they can create a variety of tasting menu options for diners. This can allow tourists to satisfy their need for uniqueness while reducing the likelihood of being unable to finish their food. Additionally, these additional options could provide diners who use restaurants to signify their status with fewer incentives to overorder if the quality of the dishes remains the same. Having smaller dishes and more tasting menus can not only help luxury restaurants have better control over the amount of food that customers are unable to finish but also improve restaurant profitability. When examining the value of luxury restaurants, researchers notice that it is not uncommon for smaller dishes to have higher profit margins, and tourists sometimes have less concern for the financial value of luxury restaurants (A. Chen & Peng, 2018).

Second, training service staff to identify potential overordering behavior might be a useful method to reduce food waste in restaurants. This likely requires some knowledge about each dish's portion size, the average customer's appetite, and the ability to observe different customers' individual circumstances. Practitioners and researchers have pointed out the importance of chefs and service staff working together when providing diners with excellent experience (Devenport, 2022; Peng et al., 2017). Once staff members can identify potential overordering behavior, they can be trained to provide advice to customers in a friendly and professional manner. During meetings between chefs and service staff, it will be useful to discuss the questions diners might have, the answers to these questions, and how to assign a point of contact to improve communication (Devenport, 2022). Additionally, encouraging staff to attend training sessions provided by external speakers or agencies related to customer service, sales, and communication might also be beneficial (OpenTable, 2023). Although reminding customers that they might overorder could reduce restaurants' revenue in the short term, it might improve diners' experiences, as overeating can cause discomfort, such as feeling tired or heartburn (Blackburn, 2018). This type of practice might be useful for luxury restaurants because service staff quality and customer experience are quite

important to these establishments (A. Chen et al., 2015).

Third, it is also possible for service staff and luxury restaurants to reduce tourists' likelihood of overordering behavior by reminding diners to be more health conscious (Chandon & Cadario, 2019). Promoting healthy menu options and providing clear nutritional information (e.g., calorie and sugar used) might make diners more conscious about their health and the benefits of healthy dining behavior, such as feeling more energetic and less chance of experiencing acid reflux. Alternatively, restaurants might want to highlight their effort to improve their customers' health by using fresh ingredients, reducing the usage of salt and sugar, and adopting healthier cooking methods (e.g., avoid deep frying when possible). This information can be communicated through service staff but also included on the menu as well as other promotional materials. Furthermore, apart from making this information conveniently available to diners, restaurants could also try to be creative and make it interesting (Chandon & Cadario, 2019).

## Limitations, Future Studies, and Conclusions

This study has contributed to the literature but it has several limitations. First, this research has focused on tourists' dining behavior at luxury restaurants. Although the luxury restaurant sector is important to the restaurant industry, there are more nonluxury restaurants than luxury restaurants. Future research could therefore examine and compare tourists' overordering behavior at luxury restaurants and nonluxury restaurants. Second, this research did not fully consider consumers' dining habits. Some consumers might be more prone to overordering food when traveling, while others might overorder food consistently. It would be interesting for future studies to explore how different types of consumers engage in overordering food at restaurants. Third, we only included diners who had previously dined at luxury restaurants for tourism purposes and had been reminded by restaurant service staff about overordering. While on-site purposive sampling is suitable for this research's objectives, it may have unintended effects on the collected data (e.g., diners who did not notice the service staff's reminder were not included in this study). Consequently, future research should consider testing the proposed model using different sampling and data collection methods (e.g., online surveys and convenience sampling).

## References


Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modelling in practice: A review and recommended two-step approach. *Psychological Bulletin, 103*(3), 411–423.

Batat, W. (2021). The role of luxury gastronomy in culinary tourism: An ethnographic study of Michelin-starred restaurants in France. *International Journal of Tourism Research, 23*(2), 150–163.

Berthon, P., Pitt, L., Parent, M., & Berthon, J.-P. (2009). Aesthetics and ephemerality: Observing and preserving the luxury brand. *California Management Review, 52*(1), 45–66.

Belfast City Council. (2023). *New scheme for diners helping restaurants to reduce food waste*. https://www.belfastcity.gov.uk/news/new-scheme-for-diners-helping-restaurants-to-r-(1)

Blackburn, K. B. (2018). *What happens when you overeat?* MD Anderson Cancer Center. https://www.mdanderson.org/publications/focused-on-health/What-happens-when-you-overeat.h23Z1592202.html

Chan, K. W., Yim, C. K. (B.), & Lam, S. S. K. (2010). Is customer participation in value creation a double-edge sword? Evidence from professional financial services across cultures. *Journal of Marketing, 74*(3), 48–64.

Chan, W. Y., To, C. K., & Chu, W. C. (2015). Materialistic consumers who seek unique products: How does their need for status and their affective response facilitate the repurchase intention of luxury goods? *Journal of Retailing and Consumer Services, 27*, 1–10.

Chandon, P., & Cadario, R. (2019, July 15). Seven ways restaurants can encourage diners to eat healthily. *Independent*. https://www.independent.co.uk/life-style/health-and-families/healthy-living/top-seven-restaurants-eat-healthy-obesity-a8997721.html

Chao, A., & Schor, J. B. (1998). Empirical tests of status consumption: Evidence from women's cosmetics. *Journal of Economic Psychology, 19*(1), 107–131.

Chen, A., & Peng, N. (2018). Examining consumers' intentions to dine at luxury restaurants while traveling. *International Journal of Hospitality Management, 71*, 59–67.

Chen, A., Peng, N., & Hung, K.-P. (2015). The effects of luxury restaurant environments on diners' emotions and loyalty: Incorporating diner expectations into an extended Mehrabian-Russell model. *International Journal of Contemporary Hospitality Management, 27*(2), 236–260.

Chen, M.-F. (2011). The joint moderating effect of health consciousness and healthy lifestyle on consumers' willingness to use functional foods in Taiwan. *Appetite, 57*, 253–262.

Cheng, H.-H., & Huang, S.-W. (2013). Exploring antecedents and consequence of online group buying intention: An extended perspective on theory of planned behavior.

*International Journal of Information Management, 33*(1), 185–198.

Cheung, M. F. Y., & To, W. M. (2019). An extended model of value-attitude-behavior to explain Chinese consumers' green purchase behavior. *Journal of Retailing and Consumer Services, 50*, 145–153.

Choe, J. Y. (J.), & Kim, S. (S). (2018). Effect of tourists' local food consumption value on attitude, food destination image, and behavioral intentions. *International Journal of Hospitality Management, 71*, 1–10.

Cleveland Clinic. (2023). *Overeating*. https://my.clevelandclinic.org/health/diseases/24680-overeating

Cohen, E. (1979). A phenomenology of tourist experiences. *Sociology, 13*(2), 179–201.

Coşkun, A., & Özbük, R. M. Y. (2020). What influences consumer food waste behavior in restaurants? An application of the extended theory of planned behavior. *Waste Management, 117*, 170–178.

D'Arpizio, C., Levato, F., Gault, C., de Montgolfier, J., & Jaroudi, L. (2021, December 20). *From surging recovery to elegant advance: The evolving future of luxury*. Bain & Company. https://www.bain.com/insights/from-surging-recovery-to-elegant-advance-the-evolving-future-of-luxury/

Devenport, M. (2022, August 9). *5 effective ways chefs can communicate with wait staff*. Auguste Escoffier School of Culinary Arts. https://www.escoffier.edu/blog/culinary-pastry-careers/5-effective-ways-chefs-can-communicate-with-wait-staff/

Dwyer, O. (2023, March 13). *Food waste makes up 'half' of global food system emissions*. Carbon Brief. https://www.carbonbrief.org/food-waste-makes-up-half-of-global-food-system-emissions/

Filimonau, V., Chiang, C.-C., Wang, L.-E., Muhialdin, B. J., & Ermolaev, V. A. (2023). Resourcefulness of chefs and food waste prevention in fine dining restaurants. *International Journal of Hospitality Management, 108*, 103368.

Filimonau, V., & De Coteau, D. A. (2019). Food waste management in hospitality operations: A critical review. *Tourism Management, 71*, 234–245.

Filimonau, V., Fidan, H., Alexieva, I., Dragoev, S., & Marinova, D. D. (2019). Restaurant food waste and the determinants of its effective management in Bulgaria: An exploratory case study of restaurants in Plovdiv. *Tourism Management Perspectives, 32*, 100577.

Filimonau, V., Matute, J., Kubal-Czerwińska, M., Krzesiwo, K., & Mika, M. (2020). The determinants of consumer in restaurant food waste mitigation in Poland: An exploratory study. *Journal of Cleaner Production, 247*, 119105.

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

Ghvanidze, S., Velikova, N., Dodd, T. H., & Oldewage-Theron, W. (2016). Consumers' environmental and ethical consciousness and the use of the related food product information: The role of perceived consumer effectiveness. *Appetite, 107*, 311–322.

Gretzel, U., Murphy, J., Pesonen, J., & Blanton, C. (2020). Food waste in tourist households: A perspective article. *Tourism Review, 75*(1), 235–238.

Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of Partial Least Squares Structural Equation Modeling in marketing research. *Journal of the Academy of Marketing Science*, *40*(3), 414–433.

Hamerman, E. J., Rudell, F., & Martins, C. M. (2018). Factors that predict taking restaurant leftovers: Strategies for reducing food waste. *Journal of Consumer Behaviours, 17*, 94–104.

Han, H., Hwang, J., Lee, M. J., & Kim, J. (2019). Word-of-mouth, buying, and sacrifice intentions for eco-cruises: Exploring the function of norm activation and value-attitude-behavior. *Tourism Management, 70*, 430–443.

Holmes, M. R., Dodds, R., & Frochot, I. (2021). At home or abroad, does our behavior change? Examining how everyday behavior influences sustainable travel behavior and tourist clusters. *Journal of Travel Research, 60*(1), 102–116.

Hosany, S., & Martin, D. (2012). Self-image congruence in consumer behavior. *Journal of Business Research, 65*(5), 685–691.

Hwang, J. (2016). Organic food as self-presentation: The role of psychological motivation in older consumers' purchase intention of organic food. *Journal of Retailing and Consumer Services, 28*, 281–287.

Hyun, S. S., Han, H., & Kim, W. (2015). A model of patrons' impulsive ordering behaviors in luxury restaurants. *Asia Pacific Journal of Tourism Research, 21*(5), 541–569.

Jang, W. E., Ko, Y. J., Morris, J. D., & Chang, Y. (2015). Scarcity message effects on consumption behavior: Limited edition product consideration. *Psychology & Marketing, 32*(10), 989–1001.

Jang, Y. J., Kim, W. G., & Lee, H. Y. (2015). Coffee shop consumers' emotional attachment and loyalty to green stores: The moderating role of green consciousness. *International Journal of Hospitality Management, 44*, 146–156.

Jin, N. (P.), Line, N. D., & Merkebu, J. (2016). Examining the impact of restaurant innovativeness on relationship quality in luxury restaurants. *International Journal of Hospitality & Tourism Administration, 17*(4), 449–471.

Jun, J., & Arendt, S. W. (2016). Understanding healthy eating behaviors at casual dining restaurants using the extended theory of planned behavior. *International Journal of Hospitality Management, 53,* 106–115.

Kang, J., Jun, J., & Arendt, S. W. (2015). Understanding customers' healthy food choices at causal dining restaurants: Using the value-attitude-behavior model. *International Journal of Hospitality Management, 48*, 12–21.

Kauppinen-Räisänen, H., Björk, P., Lönnström, A., & Jauffret, M.-N. (2018). How consumers' need for uniqueness, self-monitoring, and social identity affect their choices when luxury brands visually shout versus whisper. *Journal of Business Research, 84,* 72–81.

Kim, K., Chan, H. C., & Kankanhalli, A. (2012). What motivates people to purchase digital items on virtual

community websites? The desire for online self-presentation. *Information System Research, 23*(4), 1232–1245.

Kim, M. J., Hall, C. M., & Bonn, M. (2021). Can the value-attitude-behavior model and personality predict international tourists' biosecurity practice during the pandemic? *Journal of Hospitality and Tourism Management, 48,* 99–109.

Kim, S., & Seock, Y.-K. (2009). Impacts of health and environmental consciousness on young female consumers' attitude towards and purchase of natural beauty products. *International Journal of Consumer Studies, 33*(6), 627–638.

Konar, N., Gunes, R., Palabiyik, I., & Toker, O. S. (2022). Health conscious consumers and sugar confectionery: Present aspects and projections. *Trends in Food Science & Technology, 123*, 57–68.

Liu, J., Zhao, Y., & Jang, S. (S.). (2021). Understanding beach tourists' environmentally responsible behaviors: An extended value-attitude-behavior model. *Journal of Travel and Tourism Marketing, 38*(7), 696–709.

Lo, A., King, B., & Mackenzie, M. (2017). Restaurant customers' attitude toward sustainability and nutritional menu labels. *Journal of Hospitality Marketing & Management, 26*(8), 846–867.

Martínez García de Leaniz, P., Crespo, A. H., & López, R. G. (2018). Customer responses to environmentally certified hotels: The moderating effect of environmental consciousness on the formation of behavioral intensions. *Journal of Sustainable Tourism, 26*(7), 1160–1177.

Matzembacher, D. E., Brancoli, P., Maia, L. M., & Eriksson, M. (2020). Consumer's food waste in different restaurants configuration: A comparison between different levels of incentive and interaction. *Waste Management, 114*, 263–273.

Mintel. (2014, July 3). *Food FOMO: Dealing with the fear of missing out*. https://www.mintel.com/food-and-drink-market-news/food-fomo-dealing-with-the-fear-of-missing-out/.

Nagaraj, S. (2021). Role of consumer health consciousness, food safety & attitude on organic food purchase in emerging market: A serial mediation model. *Journal of Retailing and Consumer Services, 59*, 102423.

OpenTable. (2023). *Restaurant training in 2023: A comprehensive overview for owners*. https://restaurant.opentable.co.uk/resources/restaurant-training/

Ospina, D. (2018). *How the best restaurants in the world balance innovation and consistency.* Harvard Business Review. https://hbr.org/2018/01/how-the-best-restaurants-in-the-world-balance-innovation-and-consistency

Peng, N. (2020). Luxury restaurants' risk when implementing new environmentally friendly programs-evidence from luxury restaurants in Taiwan. *International Journal of Contemporary Hospitality Management, 32*(7), 2409–2427.

Peng, N., & Chen, A. (2019). Luxury hotels going green—The antecedents and consequences of hesitation. *Journal of Sustainable Tourism, 27*(9), 1374–1392.

Peng, N., & Chen, A. (2021). Consumers' luxury restaurant reservation session abandonment behavior during the COVID-19 pandemic: The influence of luxury restaurant attachment, emotional ambivalence, and luxury consumption goals. *International Journal of Hospitality Management, 94*, 102891.

Peng, N., Chen, A., & Hung, K.-P. (2014). Including pets when undertaking tourism activities. *Tourism Analysis-An Interdisciplinary Journal, 19*(1), 69–84.

Peng, N., Chen, A., & Hung, K.-P. (2017). The effects of teppanyaki restaurant stimuli on diners' emotions and loyalty. *International Journal of Hospitality Management, 60*, 1–12.

Pino, G., Amatulli, C., Nataraajan, R., & Guido, G. (2019). Brand prominence and social status in luxury consumption: A comparison of emerging and mature markets. *Journal of Retailing and Consumer Services, 46,* 163–172.

Podsakoff, P., MacKenzie, S. L., Jeong-Yeon, L., & Podsakoff, N. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*, 879–903.

Remar, D., Sukhu, A., & Bilgihan, A. (2022). The effects of environmental consciousness and menu information on the perception of restaurant image. *British Food Journal, 124*(11), 3563–3581. https://doi.org/10.1108/BFJ-06-2021-0666

Rousta, A., & Jamshidi, D. (2019). Food tourism value: Investigating the factors that influence tourists to revisit. *Journal of Vacation Marketing, 26*(1), 73–95.

Seiders, K., Flynn, A. G., Berry, L. L., & Haws, K. L. (2015). Motivating customers to adhere to expert advice in professional services: A medical service context. *Journal of Service Research, 18*(1), 39–58.

Sharma, R., Dhir, A., Talwar, S., & Kaur, P. (2021). Overordering and food waste: The use of food delivery apps during a pandemic. *International Journal of Hospitality Management, 96*, 102977.

Shin, H., Eastman, J. K., & Mothersbaugh, D. (2017). The effect of a limited-edition offer following brand dilution on consumer attitudes toward a luxury brand. *Journal of Retailing and Consumer Service, 38*, 59–70.

Shin, J., & Mattila, A. S. (2019). When organic food choices shape subsequent food choices: The interplay of gender and health consciousness. *International Journal of Hospitality Management, 74*(Part A), 94–101.

Shin, Y. H., Im, J., Jung, S. E., & Severt, J. K. (2019). Motivations behind consumers' organic menu choices: The role of environmental concern, social value, and health consciousness. *Journal of Quality Assurance in Hospitality & Tourism, 20*(1), 107–122.

Talwar, S., Kaur, P., Okumus, B., Ahmed, U., & Dhir, A. (2021). Food waste reduction and taking away leftovers: Interplay of food-ordering routine, planning routine, and motives. *International Journal of Hospitality Management, 98,* 103033.

Tam, B. T., Morais, J. A., & Santosa, S. (2020). Obesity and ageing: Two sides of the same coin. *Obesity Reviews, 21*(4), e12991.

Tonini, D., Albizzati, P. F., & Astrup, T. F. (2018). Environmental impacts of food waste: Learning and challenges from a case study on UK. *Waste Management, 76*, 744–766.

UN Environment Programme. (2021). *UNEP food waste index report*. https://www.unep.org/resources/report/unep-food-waste-index-report-2021

Wang, L.-E., Filimonau, V., & Li, Y. (2021). Exploring the patterns of food waste generation by tourists in a popular destination. *Journal of Cleaner Production, 279*, 123890.

Weber, C. T., Trierweiler, L. F., & Trierweiler, J. O. (2020). Food waste biorefinery advocating circular economy: Bioethanol and distilled beverage from sweet potato. *Journal of Cleaner Production, 268,* 121788.

Whaley, J. E., Kim, S.-H., & Kim, Y.-K. (2019). Drivers and impact of restaurant tipping behavior. *Journal of Foodservice Business Research, 22*(2), 117–131.

Wilson, N. (2021). *Consumers becoming more eco-conscious and willing to travel, attend mass events, PwC survey reveals*. PwC. https://www.pwc.com/gx/en/newsroom/press-releases/2021/global-consumer-insights-pulse-survey-2021.html

Yang, W., & Mattila, A. S. (2016). Why do we buy luxury experiences? *International Journal of Contemporary Hospitality Management, 28*(9), 1848–1867.

Yu, Z., Ju, X., Bai, L., & Gong, S. (2021). Consumer's over-ordering behavior at restaurants: Understanding the important roles of interventions from waiter and ordering habits. *Appetite, 160*, 105092.

Zeng, T., Durif, F., & Robinot, E. (2021). Can eco-design packaging reduce consumer food waste? An experimental study. *Technological Forecasting & Social Change, 162*, 120342.

Zhan, L., & He, Y. (2012). Understanding luxury consumption in China: Consumer perceptions of best-known brands. *Journal of Business Research, 65*(10), 1452–1460.