

**Can Personality Influence People's Intention to Cruise?  
The Role of Personality in Chinese Propensity for Cruising**

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*Acknowledgement: This research project is funded by the Public Policy Research  
Funding Scheme from the Central Policy Unit of the Hong Kong Special Administrative  
Region Government (Project Number: 2015.A6.061.15D).*

*Declarations of interest: none.*

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### **Abstract**

Understanding the effects of tourists' personality characteristics on cruise-related decision making is vital to the development of cruise tourism but remains unexplored. The purpose of this study is to examine the relationships among tourists' personality traits, emotions, and cruising intentions. Two rounds of online surveys were conducted in Mainland China ( $N = 2400$ ). Results reveal the major role of personality in tourists' emotions and cruising intentions and highlight the impact of emotion on cruising intention. Allocentric tourists are more likely to express positive emotions toward cruising and to embark on cruises compared with psychocentric tourists. Theoretical and practical implications are discussed.

### **Keywords**

Personality; emotion; cruising intention; cruise tourism; cruise decision making

### **1 Introduction**

According to Cruise Lines International Association (CLIA), the cruise industry has enjoyed compound annual growth of 8.2% since the 1980s (Wang, 2020). With an increase of 66.85%, the number of global cruise passengers jumped from 17.8 million in 2009 to 29.7 million in 2019; this figure was projected to reach 37.6 million in 2025 prior to COVID-19. These statistics convey the international cruise market's strong development prospects and great market potential (CLIA, 2019; CLIA, 2020; Wang, 2020). Despite the unprecedented challenges that COVID-19 has brought to cruising worldwide, industry development is expected to continue once operations resume in the post-pandemic era.

With 2.4 million passengers, Mainland China represents the second-largest source market in the global cruise industry, accounting for 55.8% of Asian passengers and 8.3% of global passengers in 2018 (CLIA, 2018a, 2018b). As indicated in the 2019 Annual Report on China's Cruise Industry, national policy support, residents' enhanced consumption capacity, rapid tourism development, and attention from the world's cruise giants have breathed new life into Chinese cruise tourism. These factors show promise for China's cruise economy in the long term (Wang, 2020). However, cruise travel is a relatively new travel mode compared with land-based tourism in Mainland China; Chinese cruisers represent only a small proportion of the overall travel population. Within this emerging

market, precisely which tourists are more inclined to travel via cruise and which are not remain unclear. Investigating the role of personality in Chinese tourists' cruise decision making will shed light on this concern.

In response to industry development, studies on cruise tourism have emerged with a primary focus on customer research (Hung, Wang, Guillet, & Liu, 2019). Understanding cruisers' behavior is vital to cruise industry growth and more nuanced academic theories. Scholars have examined various antecedents of cruisers' behavior, such as cruising motivations, the perceived quality and value of cruising, trip satisfaction, ship attributes, and cruise tourism image (Hung & Petrick, 2011b; Petrick, 2004c; L. Wu, Dong, & Xiong, 2020; Xie, Kerstetter, & Mattila, 2012). However, more research is needed to fully understand and anticipate cruisers' behavior. To examine underlying causes of their behavior, it is essential to explore cruisers' personal characteristics with regard to this travel mode. Current cruiser profiles are generally limited to demographics (e.g., age, gender), socioeconomics (e.g., education, income, household size), and geographic attributes (e.g., tourist-generating regions) (Chua et al., 2019; De La Viña & Ford, 2001; Sanz-Blas, Carvajal-Trujillo, & Buzova, 2019); far less is known about cruisers' fundamental psychographic attributes. The psychology literature has shown that personality characteristics profoundly affect individuals' consistent patterns of feeling, thinking, and behaving, which may explain people's tendencies to experience certain emotions and engage in particular behaviors (Cervone & Pervin, 2015). Yet it remains unknown (a) whether travelers with certain personality types are more inclined to travel via cruise than others and (b) how travelers with different personalities perceive cruise travel. Answers to these questions will help the cruise industry target prospective consumers with a higher propensity for cruising and adjust industry products and marketing strategies accordingly. Therefore, profiling cruisers on the basis of personality is necessary to comprehend their thoughts, emotions, and behavior. However, research on cruisers' personality characteristics remains absent from the cruise industry and related literature.

The present study seeks to examine the impact of personality on cruisers' emotions and behavior. Specifically, it aims to (1) investigate the role of personality in Chinese travelers' cruising intentions; (2) identify the influence of personality on these travelers' cruising-related perceptions (e.g., emotions); and (3) assess the relationships among personality, emotion, and cruising intention. Given the size and growth potential of the Chinese cruise market, this study focuses on Chinese cruisers. To the authors' best knowledge, this study is the first to explore cruisers' personality traits and their effects on cruisers' behavioral

intentions. Theoretically, this study sheds fresh light on the role of personality in tourists' emotional responses (i.e., overall feelings about cruising) and cruising intentions. As a pioneering effort, this work presents a personality profile of Chinese cruisers and constructs a preliminary psychographic system of cruise tourism to contribute to systematic knowledge of cruising. By acknowledging the personality characteristics that contribute to stronger cruising intentions, academics can begin to consider obscure but worthwhile topics such as why some people cruise and others do not, which types of people are more likely to embark on cruises, and the personality traits of typical cruisers. Practically, in the face of the current pandemic as well as intense competition, cruise industry stakeholders must better understand their customer base to effectively revive this industry. A clear understanding of cruising's target market and customer profile is paramount to the development of cruise tourism.

## **2 Literature Review**

### **2.1 Cruise tourism**

Endowed with the characteristics of “tourism” and “hospitality,” a cruise refers to “a leisure experience wherein cruisers travel on a cruise ship to different destinations” (Hung et al., 2019, p. 207). Cruise tourism is defined as “a socio-economic system generated by the interaction between human, organizational and geographical entities, aimed at producing maritime-transportation-enabled leisure experience” according to the cruise entities, interrelationships, and themes framework (Papathanassis, 2017; Papathanassis & Beckmann, 2011, p. 166). With roots that can be traced back to the 1840s, the modern cruise industry was born in the 1960s as the transport business was gradually replaced by aircraft and as shipping companies restructured their services from transportation to vacation travel (Hoseason, 2000; Kwortnik, 2006). Cruise ships have increased in size and offered more on-board amenities since the 1980s, evolving from a transportation medium to “floating hotels” and finally to “floating resorts” or “floating destinations” (Papathanassis, 2019). Representing one of the fastest-growing tourism segments, the cruise sector has undergone rapid development in the 21<sup>st</sup> century (Papathanassis, 2017; Sun, Jiao, & Tian, 2011).

Despite the industry's prosperous development, cruise-related research was initially scarce and lagged behind industry practices but later began to capture scholars' attention (Hung et al., 2019; Papathanassis & Beckmann, 2011; Vega-Muñoz, Arjona-Fuentes, Ariza-Montes, Han, & Law, 2020). Cruise research is inherently multidisciplinary and crosses the business and management domains, followed by sociology, psychology, economics, environment, geography, engineering, and technology (Papathanassis &

Beckmann, 2011; Vega-Muñoz et al., 2020). Cruising studies have explored various industry topics from diverse perspectives, ultimately covering four major themes: customer research, cruise management, employee management, and destination management (Hung et al., 2019).

## **2.2 Cruising intention**

Behavioral intention refers to an individual's likelihood or readiness to engage in a behavior (Oliver, 1997). Common behavioral intentions include word-of-mouth communication, purchase intention, price sensitivity, and complaining behavior (Zeithaml, Berry, & Parasuraman, 1996). It is necessary to evaluate cruising intention given its high predictive power vis-à-vis cruisers' actual behavior and its impact on the cruise industry's survival and success in an increasingly competitive travel marketplace (Han & Hyun, 2019). Customer-focused studies have revealed multiple antecedents that significantly influence tourists' cruising intentions. In general, loyalty (Petrick, 2004a), quality, value and satisfaction (Petrick, 2004c), affective factors (Duman & Mattila, 2005), price sensitivity (Petrick, 2005), familiarity and social influence (Petrick, Li, & Park, 2007), cruising motivation (Hung & Petrick, 2011b), self- and functional congruity (Hung & Petrick, 2011a, 2012b), cruising constraints (Hung & Petrick, 2012a, 2012b), cruise ship attributes (Xie et al., 2012), personal and social norms (Han, Hwang, Lee, & Kim, 2019), cruise vacation pricing, cruise duration, distance from the cruise port, itineraries, cruise lines' environmental friendliness and online reviews (Bahja, Cobanoglu, Berezina, & Lusby, 2019), and cruise tourism image (L. Wu et al., 2020) can affect travelers' cruising intentions to varying degrees. Scholars have recently sought to integrate an array of factors into a multidimensional and hierarchical model to explain tourists' cruising intentions. For instance, Wu, Cheng, and Ai (2018) identified relationships among functional value, experiential satisfaction, experiential quality, trust, corporate reputation, and cruisers' behavioral intentions. Han, Hwang, and Lee (2018) suggested that image congruence, affect, satisfaction, switching costs, and trust each influence travelers' intentions to repurchase a luxury cruise product by considering the moderating impact of conspicuousness. Chua, Lee, Kim, and Han (2019) verified interrelationships between quality factors, satisfaction, affective commitment, and behavioral intentions across different gender and age groups of cruise vacationers. Han and Hyun (2019) examined the major roles of tourists' cruising motivations, hedonic and utilitarian values, overall company image, desire, and relationship investment in generating repeat cruising intentions.

In addition, few studies have addressed cruisers' personal characteristics in terms of

sociodemographics and surface features. Marital status and income are key to determining one's intention to choose a cruise vacation (De La Viña & Ford, 2001), whereas gender, age, and education have moderating effects on tourists' cruising intentions (Chua et al., 2019; Sanz-Blas, Carvajal-Trujillo, & Buzova, 2019). De Cantis, Ferrante, Kahani, and Shoval (2016) delineated passengers' profiles on the basis of destination behavior, revealing seven broad patterns of cruiser activity that were associated with certain sociodemographic features.

Consistent with research on general travel determinants, the aforementioned cruise determinants can be classified into two types: internal and external factors (Li & Kwortnik, 2017). Internal factors reflect the individual characteristics of decision makers or behavior subjects such as age, motivation, and personality; external factors refer to attributes of cruise providers including price, brand, and quality (Li & Kwortnik, 2017). Yet despite being regarded as a main internal factor, tourist personality has not been studied in the cruise industry, leading to an incomplete understanding of travelers' cruising intentions (Tsiakali, 2018). Personality characteristics remain relatively stable across time and situations. These features can differentiate people and heavily influence individuals' mental health, emotional experiences, and social behavior (Cervone & Pervin, 2015; Costa & McCrae, 1988). Therefore, personality may be a superior predictor of human behavior compared with other characteristics (e.g., demographics) that can change over time (Jani, Jang, & Hwang, 2014). Examining the role of personality in cruise decision making is likely to enhance our understanding of travelers' mindsets and to improve cruise industry practices.

### **2.3 Personality**

Personality has been examined in various travel settings such as dive tourism (Ong & Musa, 2012), religious tourism (Abbate & Di Nuovo, 2013), adventure tourism (Jin, Xiang, Weber, & Liu, 2019; Lee & Tseng, 2015), wine tourism (Galloway, Mitchell, Getz, Crouch, & Ong, 2008), and the hotel sector (Jani & Han, 2013, 2014a, 2015). However, it has not been considered within the context of cruise tourism. Different from traditional travel, cruise tourism is a unique travel mode that integrates a destination and resort, making it more difficult to unravel travelers' intentions to take a cruise compared with their intentions to simply visit a destination or stay at a hotel. It is therefore crucial to identify the types of travelers to whom this compositive travel product appeals. Accordingly, investigating whether and how travelers' personality traits shape their cruising intentions holds particular value for emerging cruise markets such as China.

Personality scientists generally agree that personality encompasses “psychological qualities that contribute to an individual’s enduring and distinctive patterns of feeling, thinking, and behaving” (Cervone & Pervin, 2015, pp. 6–7). Personality has been framed as an influential concept and determining factor of various touristic phenomena and consumer behaviors in tourism and hospitality (Cohen, Prayag, & Moital, 2014; Leung & Law, 2010). As the first scholar to conduct tourist personality research, Plog (1974, 2001) developed the tourist psychographic system to explain how destinations appeal to specific types of travelers (Leung & Law, 2010). According to this model, travelers with an allocentric (venturer) personality are typified by novelty-seeking, independence, and adventurousness, whereas travelers with a psychocentric (dependable) personality are characterized by familiarity-seeking, uncertainty avoidance, and conformity (Kim, Yilmaz, & Choe, 2019; Plog, 2001). Plog (1974, 2001) also pointed out associations among travel personality and destination selection, indicating that tourists’ personality traits guide their travel patterns and preferences. Recently, Kim et al. (2019) further assessed the predictive power of Plog’s notion of travel personality in destination marketing by revealing that the congruity between tourists’ travel personality and perceived destination characteristics influences travelers’ attitudinal and behavioral responses to a destination. Again using Plog’s framework, Poon and Huang (2017) found that allocentric tourists were more likely to use Airbnb than psychocentric tourists.

Moreover, on the basis of other personality typologies, a body of work has demonstrated that personality plays a prominent role in tourists’ travel decisions and behavioral intentions. Martin and Myrick (1976) and Barnett (2013) suggested that personality can predict an individual’s preferred leisure activities. Frew and Shaw (1999) contended that personality is related to tourism behavior including actual visitation, interest in visiting, and intention to visit tourist attractions. With the advent of social media, Tsiakali (2018) noted that personality influences all travel decision-making phases (i.e., need recognition, information searches, evaluation of alternatives, and purchase decisions) when tourists read user-generated content and marketing-generated content. Given the power to forecast tourists’ behavior and destination preferences, tourist personality types have been applied to destination recommendation systems (Gretzel, Mitsche, Hwang, & Fesenmaier, 2004). In a hotel context, Jani and Han (2014a) stated that extraversion, agreeableness, and neuroticism from the Big Five personality factors significantly affected visitors’ satisfaction and in turn significantly influenced hotel image and guests’ behavioral intentions. Tang and Lam (2017) found that extraversion and agreeableness were positively associated with consumers’ attitudes toward and willingness to pay for green hotels. Personality is especially pertinent to adventure tourism (Jin et al., 2019; Lee &

Tseng, 2015). For instance, Jin et al. (2019) discovered that personality affects tourists' motivation and involvement in adventure tourism activities. Lee and Tseng (2015) found that personality traits including extraversion and openness inform tourists' risk-taking attitudes and adventure behavior. Mowen's (2000) meta-theoretic model of motivation and personality (3M model) offers a theoretical framework to explain how personality traits shape individuals' adventure travel propensity and behavior (Schneider & Vogt, 2012). To this end, the following hypothesis is proposed:

Hypothesis 1: Personality influences individuals' cruising intentions.

## **2.4 Emotion**

Researchers in the field of emotion have proposed an array of definitions from various perspectives, but no uniform definition of emotion exists (Kleinginna & Kleinginna, 1981). Kleinginna and Kleinginna (1981) emphasized many possible aspects of emotion in summarizing the literature and concluded that "Emotion is a complex set of interactions among subjective and objective factors, mediated by neural/hormonal systems, which can (a) give rise to affective experiences such as feelings of arousal, pleasure/displeasure; (b) generate cognitive processes such as emotionally relevant perceptual effects, appraisals, labeling processes; (c) activate widespread physiological adjustments to the arousing conditions; and (d) lead to behavior that is often, but not always, expressive, goal-directed, and adaptive" (p. 355). In nature, emotion refers to an internal feeling state, which can be defined as "states characterized by episodes of intense feelings associated with a specific referent and instigate specific response behaviors" (Cohen, Pham, & Andrade, 2008; Hosany, 2012, p. 303). The terms "emotion", "affect" and "feeling" are often used interchangeably in the literature (Han et al., 2018; Jani & Han, 2014b; Kleinginna & Kleinginna, 1981).

Traditionally, emotions have been conceptualized using two approaches: the general approach and the specific approach, which are accompanied by two principal methods to measure emotions accordingly (Dubé & Menon, 2000; Ladhari, 2007; Leri & Theodoridis, 2020; Lin, Kerstetter, Nawijn, & Mitas, 2014). The general approach focuses on broad dimensions of emotions (Dubé & Menon, 2000; Leri & Theodoridis, 2020; Y. Lin et al., 2014), such as pleasure and arousal (PA) as measured by Russell and Pratt's (1980) pleasure and arousal scale or positive and negative affect as assessed using Watson, Clark, and Tellegen's (1988) Positive Affect and Negative Affect Scales. The specific approach emphasizes a set of discrete and basic emotions/affective states (Dubé & Menon, 2000; Leri & Theodoridis, 2020; Lin et al., 2014), such as joy, sadness, anger, surprise, and fear

as evaluated with Izard's (1977) Differential Emotion Scale and Plutchik's (1980) primary emotions scale. Most commonly, researchers apply either the pleasure-arousal-dominance scale (Mehrabian & Russell, 1974) or PA scale (Russell & Pratt, 1980), which are semantic differential scales that reflect the bipolar structure of emotion (Cohen et al., 2008; Hosany, Ekinici, & Uysal, 2007; Hosany & Gilbert, 2010; Ladhari, 2007). Based on Russell and Pratt's (1980) PA scale and by taking into account specific characteristics of cruise tourism, Hung and Petrick (2011a) devised a semantic differential scale that measures the affective image of cruising.

Numerous studies across multiple disciplines have recognized the intense impact of emotion on human psychology, cognition, and behavior (Cohen et al., 2008). The consumer literature shows that emotion plays a central role in the customer experience and in consumer behavior such as satisfaction, decisions, motives, and actions (Cohen et al., 2008; Dubé & Menon, 2000; Han et al., 2018; Ladhari, 2007). An extensive body of tourism and hospitality literature has explored customers' emotional (i.e., affective) experiences and responses, revealing that emotion has a vital influence on customer behavior (e.g., Baloglu & McCleary, 1999; Hosany, 2012; Jani & Han, 2014b; Lin et al., 2014; Petrick, 2004b). Certain emotions also carry specific action tendencies (e.g., desire—approach, fear—avoidance, enjoyment—being-with, joy—free activation, anxiety—inhibition) that can be translated spontaneously into proxies of behavior such as evaluations and intentions, in addition to leading to actual behavior (Cohen et al., 2008; Frijda, 1986). In general, according to the approach and avoidance motivation, humans have a propensity to move toward (or maintain contact with) a positive stimulus and to move away from (or maintain distance from) a negative stimulus (Elliot, 2008). Therefore, positive emotions energize or direct approach behavior whereas negative emotions energize or direct avoidance behavior (Elliot, 2008). The following hypothesis is hence put forth:

Hypothesis 2: Emotions toward cruising influence individuals' cruising intentions.

## **2.5 Personality and emotion**

In psychology, many researchers agree that emotion is inextricably interwoven with personality (Gountas & Gountas, 2007; Matzler, Faullant, Renzl, & Leiter, 2005). Personality traits naturally exert considerable effects on individuals' emotional predispositions (Cervone & Pervin, 2015). Some scholars hold the view that certain personality traits represent endogenous differences in individuals' sensitivity or response magnitude to positive- or negative-emotion stimuli, leading to differences in positive or

negative emotion (Larsen & Ketelaar, 1991; McCrae & Costa, 1991). McCrae and Costa (1991) demonstrated that the Big Five factors of personality are main determinants of positive and negative affect as follows: neuroticism leads to more negative affect; extraversion, agreeableness, and conscientiousness lead to more positive affect; and openness leads to more positive and negative affect. Watson and Clark (1992) investigated these five personality factors in relation to two higher-order affect dimensions (i.e., positive and negative affect) and noted the need to examine relations at the lower-order level (i.e., specific types of affect such as fear, hostility, and joviality). The authors found that the Big Five factors and their facets were significantly associated with general or specific emotions to varying degrees. In particular, the strong relationships between extraversion and positive emotion and between neuroticism and negative emotion have been replicated most consistently (Larsen & Ketelaar, 1991; Matzler et al., 2005). Neuroticism appears to correlate with negative emotion so closely that some researchers have relabeled this factor “negative emotionality” (Soto & John, 2017a).

In the past decade, only a few attempts have been made to contextualize the relationships among personality, emotion, and consumer behavior in tourism and hospitality. Gountas and Gountas (2007) demonstrated that personality orientations are directly related to emotional states and that both of these facets influence consumers’ evaluations of airline service satisfaction as well as repurchase intentions. Faullant, Matzler, and Mooradian (2011) indicated that neuroticism and extraversion respectively affect two basic consumption emotions, fear and joy, and thus shape tourists’ satisfaction with adventure tourism. Lin and Worthley (2012) assessed the effects of different personality traits (i.e., extroversion and arousal-seeking tendency) on customers’ emotions, satisfaction, and approach–avoidance behavior in different servicescape situations. Jani and Han (2013) verified that personality explains significant variations in individuals’ consumption emotions, subsequently coloring hotel guests’ satisfaction, revisit intentions, and word-of-mouth intentions. Specifically, among the Big Five, extraversion has a significant impact on positive consumption emotions, neuroticism has a significant influence on negative consumption emotions, and agreeableness has a significant effect on both types of consumption emotion (Jani & Han, 2013). From the perspective of variational emotion, Lin et al. (2014) discovered that not only is personality a strong predictor of specific emotion, but it also influences emotion-based changes. Extraversion was found to determine tourists’ baseline level of fear and sadness while emotional stability (i.e., neuroticism) moderated changes in disgust across individuals’ vacations (Lin et al., 2014). Among these limited studies, the relationship of personality and emotion in tourism remains underexplored. Furthermore, prior work solely focused on tourists’ emotions

during the consumption process (i.e., consumption emotions) but neglected their emotions in the pre- and post-consumption stages. Consumption emotion is volatile and evolves throughout a vacation (Y. Lin et al., 2014). Pre- and post-consumption emotions are comparatively more stable, as they have been precipitated and solidified by time. With respect to consumers' composite feelings about a travel product, pre- and post-consumption emotions both play primary roles in travelers' decision making (Papadimitriou et al., 2015). Therefore, this study proposes that personality will affect emotions—specifically those that indicate travelers' integrated feelings and emotional responses towards cruising during the pre-consumption stage (for cruisers and non-cruisers) and the post-consumption stage (for cruisers). The following hypothesis is therefore proposed:

Hypothesis 3: Personality influences emotion toward cruising.

To summarize, given the described conceptual and empirical foundations, this study presumes that travelers' personality characteristics and emotions strongly influence their cruising intentions and that personality also affects emotion. The proposed conceptual framework is illustrated in Fig. 1.

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 Fig. 1  
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### 3 Methods

Quantitative data for this study were collected through a self-administered questionnaire that captured respondents' personality traits, emotions about cruising, cruising intentions, and demographic variables. Personality traits were measured using Soto and John's (2017b) Big Five Inventory-2-Short (BFI-2-S). Among myriad personality trait taxonomies, the Big Five taxonomy is the most widely known, globally recognized, well-researched, well-regarded, and applied model for evaluating personality (Leri & Theodoridis, 2020; Tsiakali, 2018). The Big Five model, also known as the five-factor model, is a hierarchical organization of personality traits across five basic dimensions including extraversion, agreeableness, conscientiousness, negative emotionality (alternatively labeled "neuroticism vs. emotional stability"), and open-mindedness (alternatively labeled "openness to experience," "intellect," or "imagination") (McCrae & John, 1992; Soto & John, 2017a). Grounded in the Big Five, the Big Five Inventory (BFI), which assesses the prototypical features of each Big Five domain using 44 short and easy-to-understand phrases, has been used in hundreds of studies and has

demonstrated considerable reliability, validity, and utility (John, Donahue, & Kentle, 1991; Soto & John, 2017a). Representing a noteworthy advance over the original BFI, the 60-item BFI-2 provides greater bandwidth, fidelity, and predictive power (Soto & John, 2017a). Soto and John (2017b) then developed the 30-item BFI-2-Short (BFI-2-S) and the 15-item BFI-2-Extra-Short (BFI-2-XS) as abbreviated forms of the BFI-2. This study employed the BFI-2-S because the instrument enables efficient administration of a manageable number of items, minimizing assessment time and respondent fatigue while retaining much of the full measure's reliability and validity (Soto & John, 2017b).

To assess respondents' subjective feelings and emotional responses toward cruising, Hung and Petrick's (2011a) affective image scale of cruising was adopted in this study. Respondents were asked to choose the most appropriate number on each semantic differential scale that best described their feelings about cruising, including Arousing/stimulating–Sleepy, Exciting–Gloomy, Pleasant–Unpleasant, Relaxing–Distressing, Enjoyable–Not enjoyable, Comfortable–Uncomfortable, Calming–Annoying, Fun/interesting–Boring, and Adventurous/thrilled–Unadventurous (1 = the latter, 7 = the former). Cruising intentions were evaluated with a modified measurement of behavioral intentions developed by Zeithaml et al. (1996). Similar to Hung and Petrick (2011b), four modified items were included in the scale: "I'll say positive things about cruising to other people," "I intend to cruise in the next 3 years," "I'll recommend cruising to others," and "I'll encourage friends and relatives to go on a cruise." Personality traits and cruising intentions were measured on a 7-point Likert scale (1 = "strongly disagree," 7 = "strongly agree") while emotional responses were evaluated on a semantic differential scale using a 7-point rating scale.

The questionnaire was originally drafted in English and then translated into Chinese by bilingual researchers proficient in both languages. Next, it was pre-tested on 37 Chinese respondents for the purposes of question refinement and completion time estimation prior to the main data collection. Based on respondents' feedback, several revisions were made to the order and wording of questions, which improved the flow of the survey and ensured that respondents understood the researchers' intended meanings for each item.

The modified questionnaire was distributed via a reputable survey company with an established market research reputation and large membership; more than 1,600,000 mainland Chinese customers are included in the company's database. Two rounds of online surveys were conducted in Mainland China by deploying random sampling with qualified members registered in the survey company's database. To generalize study

results to the target market of cruise line companies, the study sample was chosen based on three criteria suggested by Cruise Line International Association and in earlier cruise research (CLIA, 2011, 2018b; Hung & Petrick, 2011a, 2011b): (1) 25 years old and above, (2) 50/50 gender distribution, and (3) earned an above-average annual household income. Additionally, given the research purpose, cruisers who had taken at least one overseas cruise vacation within the past 12 months and non-cruisers who had taken at least one overseas leisure trip within the past 12 months were included in this study. As the personality measure was developed and mainly validated in Western contexts, the applicability of this measure in relatively new cruise markets such as China is unknown. Therefore, the first-round survey of 800 respondents served as a pilot test to assess the instrument's factor structure and reliability. Then, 1600 respondents were included in the main survey—400 each from four first-tier cities with top economic power and advanced city competitiveness in Mainland China (i.e., Beijing, Shanghai, Guangzhou, and Shenzhen). Among them, 916 respondents were cruisers and 684 respondents were non-cruisers.

A non-response bias check is commonly performed to verify a sample's representation. Typically, respondents and non-respondents are compared based on the mean values of selected variables in a non-response bias check (Hung, Sirakaya-Turk, & Ingram, 2011). As reaching non-respondents for an online survey is not feasible, an alternative non-response bias check was adopted in this study. Following prior literature (e.g., Li, 2006; Hung and Petrick, 2010), early and late respondents were compared on age and gender to test for possible non-response bias in the sample as a proxy of a non-response bias check. Respondents were divided into early and late respondent groups based on the time they took to respond to the survey after receiving the survey invitation. Respondents who completed the survey within 5 days of receiving the invitation were considered early respondents (1058), while those who responded 5 days later were regarded as late respondents (542). An independent sample *t*-test and Chi-square test were performed on age and gender, respectively, to identify differences in the two groups. Results suggested that early and late respondents were not statistically different in age and gender (Table 1).

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 Table 1  
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Frequencies in SPSS 26.0 were first used to summarize the sample's demographic profile, which is presented in Table 2. As requested, the sample had approximately balanced proportions of men (52.9%) and women (47.1%). Respondents were 35 years old on

average, with a minimum age of 25 and a maximum age of 69. Most were married (86.6%), highly educated with a bachelor or post-graduate degree (81.5%), and employed full-time (90.6%). Roughly three-quarters (74.3%) of respondents earned a monthly household income of RMB 10,001–40,000. A sampling bias check was conducted by comparing the sample’s demographic characteristics with profiles of the Chinese cruise market. As stated in the Annual Report on China’s Cruise Industry in 2015 (Pinchain, 2015), the average age of Chinese cruisers was 38 years; more than 70% had a bachelor or post-graduate degree; 70% came from middle-income families with a monthly household income of RMB 10,000–20,000; and more than 90% were either employed or retired, collectively. On the whole, these profiles were similar to the sample in this research, showing that study respondents were typical Chinese cruisers and the sample was adequately representative of its target population.

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Table 2  
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## **4. Findings**

### **4.1 Dimensionality of tourists’ personality traits in the cruise context**

Confirmatory factor analyses were first performed on the main dataset to test the validity of the measurements. The results suggest that the validity of the Big Five personality measure was not satisfactory. This could be due to the distinct personality traits of Chinese travelers. After performing exploratory factor analyses on the first-round data in SPSS 24 with principal component extraction and eliminating items with low factor loadings or cross-loadings, a two-factor solution emerged covering 16 items (8 per factor). The two factors accounted for 52.5% of the total variance. The Kaiser-Meyer-Olkin result (.914) indicated that the sample size was sufficient. The Cronbach’s alpha value for each factor was 0.888 and 0.827, respectively, exceeding the threshold of 0.7 to convey sound reliability.

The first factor included personality traits that are more passive and negative, including feeling depressed, having difficulty getting started, being disorganized, being rude, tending to worry a lot, being cold and uncaring, being temperamental, and having little interest in abstract ideas. This group of personality traits is close to that of the psychocentric tourists that Plog (1974) described when exploring different types of tourists, namely those who were more likely and less likely to fly. According to Plog (1974), psychocentric tourists (or dependables) experience generalized anxiety, a sense of powerlessness, and territory boundness. They are passive, avoid making decisions, and

often waste time on small things in life. They are often intellectually constrained, less explorative, and are not interested in new ideas. These types of people also tend to spend less money, largely due to fear rather than good planning. The personality traits in this dimension closely resemble the profiles that Plog (1974) described for psychocentric tourists. As such, we labeled this dimension the psychocentric personality. This factor accounted for 28.6% of the total variance.

The second factor consisted of items featuring somewhat opposing traits: being original and having new ideas; being outgoing; being full of energy; being relaxed; being reliable; assuming the best about people; being interested in art, music, and literature; and being emotionally stable. These traits align with those of allocentric tourists as identified by Plog (1974). According to Plog (1974), allocentric tourists (or venturers) are self-confident and are explorative of the world. They are outgoing, worry little, and make decisions quickly. They are full of energy and tend to be relaxed. They also have stronger intellectual curiosity. Therefore, this factor was labeled the allocentric personality and accounted for 23.9% of the total variance in this study. Table 3 details the above factor exploration.

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Table 3  
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#### **4.2 Measurement model**

As the above two factors reflected opposing personality traits, they were treated as two individual personality constructs and were tested with other constructs of interest (i.e., emotion and behavioral intention) to confirm the measurement model. First, a normality test was performed in SPSS to check if the data was normal. Kline (2015) suggested that the significance tests intended to detect violation of multivariate normality, including Mardia's test, have limited usefulness because slight departures from multivariate normality could be significant in large samples. Therefore, in this study with a sample size of 1600, a more descriptive approach was used to assess normality (Kline, 2015). The means, standard deviations, skew and kurtosis of the items used in scaled data were presented in the Appendix A. The results suggested that the items had only mild skewness (the absolute values were smaller than 3) and mild kurtosis (the absolute values were smaller than 8) (Kline, 2015). Maximum Likelihood (ML) was conducted for this study since this method has been proved to be a robust estimator when fitting model to moderately nonnormal data with large sample sizes (Muthén and Kaplan, 1985). Then, AMOS 24 was used for model evaluation. Results revealed acceptable goodness-of-fit

indices ( $\chi^2 = 1941.758$ ,  $df = 371$ ,  $p < .001$  GFI = .917, CFI = .951, RMSEA = .051). Most items had factor loadings greater than 0.5, with two higher than 0.4, reflecting a significant contribution of all items to the construct of interest (Chen & Hsu, 2001; Gursoy & Gavcar, 2003). All composite reliability (CRs) estimates were above 0.5. The average variance extracted (AVEs) for most constructs was higher than 0.5 with one below 0.5. Correlations among the constructs were all lower than 0.85, demonstrating acceptable discriminant validity (Kline, 2005). Table 4 lists detailed information about the measurement model, and Table 5 depicts the discriminant validity among constructs.

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Table 4
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Table 5
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### 4.3 Hypotheses testing

Structural equation modeling (SEM) was performed to test how personality trait constructs influenced tourists’ emotions about cruising and their consequent behavioral intentions. SEM was conducted with a larger dataset ( $N = 1600$ ) gathered in the second round of data collection. The model fit indices ( $\chi^2 = 1993.059$ ,  $df = 372$ ,  $p < .001$ , GFI = .916, CFI = .949, RMSEA = .052) indicated that the hypothesized model fit the data well. Therefore, this structural model adequately explained relationships among the four constructs – psychocentric personality, allocentric personality, emotion, and behavioral intention. All paths were significant at the .01 level; that is, a psychocentric personality negatively influenced tourists’ emotions about cruising and their behavioral intentions. By contrast, an allocentric personality positively influenced tourists’ emotions about cruising and their associated behavioral intentions. As expected, tourists’ emotions about cruising significantly affected their behavioral intentions. What is more, emotions tended to mediate the relationship between personality and behavioral intentions. Table 6 presents the details of each path; Table 7 shows the mediation results.

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Table 6
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Table 7
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## 5 Discussion

The purpose of this study was to investigate the effects of tourists' personality traits on their emotions and cruising intentions and to explore the relationships among personality, emotion, and cruising intention. Given the increasing popularity of cruise tourism, the increasing diversity of cruisers' profiles, and the dearth of research on cruisers' personality and emotions, the establishment of personality profiles in the cruising context and an investigation of the roles of personality and emotions in tourists' cruising intentions contribute meaningfully to the literature and industry. Two rounds of online surveys were conducted with cruisers and non-cruisers in Mainland China, yielding informative data that substantiated the three hypotheses and proposed model.

Hypothesis 1 suggested that personality influences cruising intentions, which was supported by this study. Specifically, tourists' personality traits loaded onto two factors, a psychocentric personality and allocentric personality. A psychocentric personality negatively influenced tourists' cruising intentions whereas an allocentric personality positively affected their cruising intentions. Therefore, under the same conditions, tourists with more psychocentric personality traits should be less likely to cruise in the future while tourists with more allocentric personality traits should be more likely to do so. The result of standardized coefficients revealed that an allocentric personality ( $B = 0.622$ ) contributed more to cruising intentions than a psychocentric personality ( $B = -0.068$ ), implying that an allocentric personality is the main influencing factor in terms of the impact of personality on cruising intention. This finding validates the role of personality in cruise decision making proposed in this study. Tourists' personality traits determine individual travel patterns and preferences (Plog, 1974, 2001). Allocentric tourists prefer destinations or travel products that can satisfy their needs and wants related to novelty seeking, adventure seeking, learning or discovering new things, interacting with others, and presenting original and new ideas. The finding that allocentric tourists have stronger intentions to embark on cruises suggests that rather than being regarded as a tourism bubble and more suitable for older tourists, cruise travel in emerging markets such as Mainland China is now perceived as a new travel mode that can fulfill allocentric tourists' preferences. In the past, cruising was thought to be of great interest to psychocentric tourists: the incipient form of cruising consisted of Atlantic crossings on ships featuring activities and an ambiance that seemed stuffy, boring, and unadventurous to active travelers. Primary cruise line offerings were also highly structured and monotonous (Plog, 2001). Today, however, cruise tourism has developed rapidly—cruise lines now offer diversified and innovative products (e.g., itineraries, facilities, and activities), making this travel mode more appealing to allocentric tourists (Papathanassis, 2017). Furthermore,

Mainland China is an emerging cruise market in which cruising represents a relatively new form of travel that appears arousing, exciting, interesting, and adventurous. Chinese allocentric tourists are hence more likely to take a cruise than psychocentric tourists.

The second hypothesis tested the influences of tourists' emotions towards cruising on their cruising intentions and was supported. The more positive emotions (e.g., arousing/stimulating, exciting, pleasant, relaxing, enjoyable, comfortable, calming, fun/interesting, and adventurous/thrilled) tourists felt towards cruising, the more likely they were to choose cruise travel. On the contrary, emotions such as sleepy, gloomy, unpleasant, distressing, not enjoyable, uncomfortable, annoying, boring, and unadventurous were found to have adverse effects on tourists' cruise intentions. This finding echoes the theory of approach and avoidance motivation, such that people tend to approach positive emotions and avoid negative emotions (Elliot, 2008). Thus, when tourists perceive cruise travel positively, they will show greater intentions to participate in a cruise to approach positive emotions. Conversely, when tourists perceive cruising negatively, they will be less inclined to choose cruising to avoid negative emotions.

Hypothesis 3 postulated that emotion toward cruising was influenced by personality, which was also supported by the data. In particular, under identical conditions, tourists' personality characteristics led to differences in their cruising-related emotions in the pre- and post-consumption stages. This pattern suggests that tourists with a psychocentric personality have a higher tendency to associate cruise travel with emotional feelings of sleepy, gloomy, unpleasant, distressing, not enjoyable, uncomfortable, annoying, boring, and unadventurous. Tourists with an allocentric personality are more likely to find cruising arousing/stimulating, exciting, pleasant, relaxing, enjoyable, comfortable, calming, fun/interesting, and adventurous/thrilling. Presumably, when faced with the same emotional stimulus (i.e., a cruise travel product), tourists with allocentric traits will exhibit greater endogenous sensitivity or a higher response magnitude to experience these positive emotions. In addition, as mentioned above, cruise travel can satisfy allocentric tourists' needs and wants, leading them to feel more positive about cruising. Combining the evidence from Hypothesis 2 with the mediation test result of emotion, our work implies that personality influences Chinese tourists' cruising intentions directly and indirectly. Emotion partially mediates the relationship between personality and travelers' cruising intentions.

## **5.1 Theoretical implications**

This study marks an initial attempt to apply the notion of personality to explain tourists' emotions and behavioral intentions in the cruise context, addressing the lack of research on this topic. Attesting to the role of personality in cruising intentions, this study highlighted it as a major complement to influential factors of cruising intentions identified in past research, thus enhancing understanding of people's decision making in cruise tourism. Our work also adds to the body of knowledge on consumer characteristics in the cruise literature by establishing a personality profile of cruisers and developing an allocentric–psychocentric psychographic system of cruise tourism. Essentially, allocentric travelers possessing traits including extraversion, open-mindedness, conscientiousness, agreeableness, and emotional stability tend to feel more positive about cruise travel and are more inclined to travel via cruise than others. Psychocentric travelers who express high levels of negative emotionality (i.e., neuroticism) and a low level of conscientiousness, agreeableness, and open-mindedness tend to express more negative sentiments about cruise travel and are less likely to travel via this mode. Furthermore, findings related to this bifactorial structure of tourist personality in a cruise tourism context partially align with Plog's (1974, 2001) travel personality framework but are distinct from the results of the Big Five factors in personality research in various disciplines. There appears to be a certain specificity to our cruise personality model, suggesting a need for subsequent research to refine or create a personality measure specific to cruise settings. Overall, this study serves as the cornerstone of the cruise personality model.

Another theoretical contribution of this study is that its results empirically confirm that pre- and post-consumption emotions are important to tourists' cruising intentions and are inherently influenced by personality to some degree. The vast majority of emotion research in tourism and hospitality has pertained to consumption emotion in general while ignoring pre- and post-consumption emotions. We argue that compared to short-lived and fickle consumption emotions that survive the consumption process, pre- and post-consumption emotions are even more relevant because they represent one's composite feelings about a travel product. These feelings are more stable and are evoked during the decision-making process. This study thus helps to demonstrate this theory and should draw researchers' attention to tourists' emotions during different stages of consumption.

## **5.2 Practical implications**

The high predictive power of personality for pre- and post-consumption emotions and cruising intentions can help cruise industry practitioners to target tourists with a higher propensity for cruising based on personality. In the past, cruise lines identified target

markets based on demographics, socioeconomics, and geographic attributes. Psychographic personality traits constitute a more stable, powerful, and reliable predictor that can unveil the underlying causes of customer behavior. Now, cruise lines can pinpoint more accurate target markets without missing potential customers with strong cruising intentions. This study found that allocentric tourists are much more inclined to take cruises than psychocentric tourists, which makes the former group a more profitable target market. Therefore, practitioners could infer potential customers' personality characteristics through information technology and big data and then reach identified target markets via appropriate advertising. For instance, marketers can cooperate with internet giants such as Google and Baidu or social media platforms (e.g., Instagram, Facebook, and Weibo) to access user data and discern their personality characteristics.

The finding that cruise travel appeals to allocentric tourists more than psychocentric tourists reflects the changes and product positioning of cruise tourism. This industry is undeniably evolving: from the Atlantic crossing to innumerable cruise itineraries, from small ships to floating resorts featuring various facilities and activities, from cruises in the Caribbean to countless destinations around the world, from the North American source market to emerging Asian markets, from senior customers to younger generations. Its customer perceptions and target markets are shifting accordingly. This study demonstrated that cruising's position along the psychocentric–allocentric psychographic spectrum appears to lean to the allocentric side from current tourists' perspectives—an ideal position that practitioners should strive to maintain. Allocentric tourists are more interested in trying new products and services, seek out new places to visit, and influence others to follow their lead (Plog, 2001).

With a clearer sense of the target markets and positioning of cruise tourism, cruise lines can formulate more effective marketing strategies. To appeal to allocentric tourists when promoting cruise vacations, promotional campaigns should use creative and imaginative messaging to spotlight the novelty, fun, adventure, excitement, and enjoyment related to cruise travel. Advertisements should also spotlight various itineraries, ports of call, and destinations and emphasize the unique recreational activities and facilities available on board. Promotional materials can portray allocentric tourists reveling in an adventurous journey by taking a cruise. Besides, with a better understanding of customers' profile, cruise operators should design corresponding products to cater to allocentric tourists: novel and unusual itineraries and destinations; excursions including expeditions, adventure tours, and island discovery; organized activities through which travelers can

meet and interact with other tourists, staff, and local residents; and themed educational events and programs related to art, music, and literature.

The positive influence of pre- and post-consumption emotions on cruising intentions suggests that marketers should promote cruise travel in ways that can elicit, maintain, or enhance travelers' positive emotions and assuage or eliminate negative emotions. To this end, marketers should aim to strengthen the positive affective image of cruising so that prospective customers perceive cruising as arousing, exciting, pleasant, relaxing, enjoyable, comfortable, calming, fun, and adventurous. To reach psychocentric tourists who tend to experience negative emotions, promotional materials should depict cruises as safe, worry-free, relaxing, and highly enjoyable. For instance, marketers can offer thoroughly planned, well-organized, and all-inclusive cruise packages; recommend established itineraries and destinations; and emphasize the simplicity of enjoying a high-class journey with careful attention from staff while on board. These efforts can mitigate tourists' potentially negative pre-consumption emotions, allay doubts about cruising, and boost their intentions to take a trip.

Furthermore, cruise operators should attend to customers with different personalities and emotions during service so as to enhance positive post-consumption emotions and avoid negative reactions. For example, operators should select employees who exhibit emotional intelligence and further train them in empathy and emotional management (Jani & Han, 2013). Staff should also seek to understand customers' personality traits at the first point of the servicescape and provide service accordingly. Managerial responses should be tailored to psychocentric tourists and allocentric tourists because the former are more susceptible to stimuli that elicit negative emotions. For instance, staff should recommend different kinds of entertainment and activities, as psychocentric tourists prefer relaxing activities while allocentric tourists prefer exciting, literary, and artistic activities. Staff should also take extra care of psychocentric tourists and comfort them in the event of on-board issues, as these tourists will more easily experience anxiety or distress compared with allocentric travelers.

## **6 Limitations and Recommendations**

This study has two major limitations. First, data were gathered in Beijing, Shanghai, Shenzhen, and Guangzhou, the four major cities of Mainland China. These cities make the most significant economic contributions to the national GDP and have the highest average household income among all cities in the country. Yet our study results should be generalized with caution; given the geographical dispersion of Chinese citizens, these

findings do not necessarily represent the greater Chinese population. Future research could test the proposed model with a more inclusive sample and extend this investigation to other important cruise markets.

Second, this study only examined the relationships among tourists' personality traits, emotions, and behavioral intentions, which are fundamental features but insufficient to uncover all mechanisms behind cruise-related decision making. Emotion was found to partially mediate the relationship between personality and behavioral intention, suggesting that other influential factors may act as mediators or moderators (e.g., the congruity between tourists' general personality and cruising personality, overall cruise image, the cognitive image of cruising, and cruise-related motivations and constraints). Future studies should incorporate other variables to more fully understand cruising intention and the impact of personality.

Third, cruise tourism was studied in a generic sense in this research. Travelers' cruise-related emotions and intentions to cruise were measured in terms of cruising overall rather than particular cruise brands. Although this approach aligns with past literature and current cruise industry needs, scholars should examine cruising at the brand level once it becomes a more common travel mode among the Chinese.

## **7 Conclusions**

In essence, this study delved into the associations among tourists' personality, emotions, and cruising intentions. People with different personalities possess varying perceptions of cruising and make different cruise-related decisions: allocentric tourists tend to feel more positively about cruising and are more likely to take cruises than psychocentric tourists. Theoretically, our results underscore the role of personality in cruise decision making. These findings also provide insight into tourists' emotions during the pre- and post-consumption stages, present a more holistic picture of cruising intentions, and offer an initial model of travelers' cruise personality. Our results also contribute practically to the cruise industry. Despite strong development momentum in past decades, the industry suffered from the unprecedented global crisis of COVID-19 in 2020. Cruising now faces a period marked by opportunities and challenges. In response, a clearer understanding of cruisers' personality traits and emotional predisposition can inform the creation of marketing strategies, acclaimed cruise products, and attentive and personalized cruise services.

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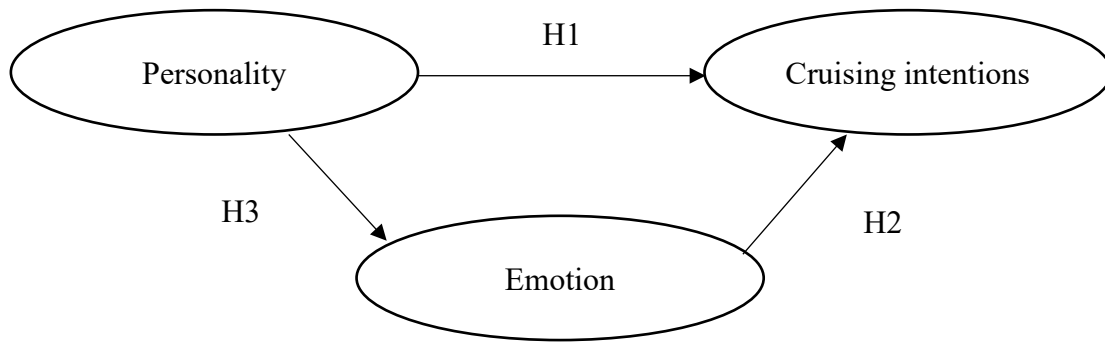
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**Fig. 1 Personality, emotion, and cruising intentions model**

**Table 1.** Non-response bias check

Variable	Test	t/Chi-square value	p
Age	Independent sample t-test	.853	.394
Gender	Chi-square test	.794	.373

**Table 2.** Respondent demographics ( $N = 1600$ )

Variables	<i>n</i>	%
<i>Gender</i>		
Male	847	52.9
Female	753	47.1
<i>Age</i>		
25–29	419	26.2
30–39	801	50.1
40–49	297	18.6
50–59	67	4.2
60–74	16	1.0
75+	-	-
<i>Marital Status</i>		
Married	1385	86.6
Single/Divorce/Separated	215	13.5
<i>Education</i>		
High school degree	48	3.0
Associate degree	247	15.4
Bachelor's degree	1135	70.9
Post-graduate degree	170	10.6
<i>Employment Status</i>		
Employed full-time	1450	90.6
Employed part-time	96	6.0
Not currently employed	31	2.0
Retired	23	1.4
<i>Monthly Household Income (RMB)</i>		
7,501–10,000	63	3.9
10,001–20,000	630	39.4
20,001–30,000	390	24.4
30,001–40,000	168	10.5
40,001–50,000	104	6.5
50,001–70,000	70	4.4
70,001–90,000	66	4.1
90,001 or above	109	6.8

**Table 3.** Dimensionality of personality traits in cruise context ( $N = 800$ )

Dimensions and items	Cronbach's alpha	Communalities	Factor loading	Item-to-total correlation	Eigenvalue	Variance explained %
<b>V1 Psychocentric personality</b>	.888				34.422	28.596
Q23x1_9 Depressed		.721	.834	.780		
Q23x1_8 Having difficulty getting started		.645	.802	.712		
Q23x1_3 Disorganized		.585	.765	.657		
Q23x1_7 Rude		.584	.762	.674		
Q23x1_4 Worry a lot		.588	.723	.667		
Q23x2_17 Cold and uncaring		.486	.690	.603		
Q23x3_29 Temperamental		.464	.674	.592		
Q23x1_10 Having little interest in abstract ideas		.474	.662	.595		
<b>V2 Allocentric personality</b>	.827				18.115	23.941
Q23x2_15 Original and new ideas		.646	.798	.698		
Q23x2_16 Outgoing		.606	.776	.646		
Q23x2_11 Full of energy		.611	.747	.660		
Q23x2_19 Relaxed		.497	.684	.586		
Q23x2_13 Reliable		.484	.676	.587		
Q23x2_12 Assume the best about people		.380	.583	.496		
Q23x1_5 Interested in art, music, and literature		.329	.559	.397		
Q23x2_14 Emotionally stable		.305	.549	.432		

Note: KMO = .914;  $\chi^2 = 5191.370$ ; Sig. = .000; *df*: 120; total variance explained: 52.537%

**Table 4.** CFA and measurement model ( $N = 1600$ )

Measurement model ( $N = 1600$ )			Estimate	S.E.	C.R.	$p$	Std FL	SMC
Psychocentric personality (Psycho)			CR = 0.911 AVE = 0.563					
q23x2_17	<---	Psycho	1.000				.638	.408
q23x1_8	<---	Psycho	1.238	.046	26.964	***	.807	.651
q23x1_10	<---	Psycho	1.021	.042	24.375	***	.708	.502
q23x1_9	<---	Psycho	1.325	.047	28.274	***	.861	.741
q23x3_29	<---	Psycho	.945	.042	22.477	***	.641	.411
q23x1_7	<---	Psycho	1.190	.046	26.013	***	.769	.592
q23x1_3	<---	Psycho	1.159	.045	25.936	***	.766	.651
q23x1_4	<---	Psycho	1.188	.045	26.349	***	.782	.408
Allocentric personality (Allo)			CR = 0.862 AVE = 0.443					
q23x2_15	<---	Allo	1.000				.768	.590
q23x2_16	<---	Allo	1.139	.040	28.420	***	.709	.503
q23x2_11	<---	Allo	.963	.031	31.266	***	.773	.597
q23x2_19	<---	Allo	.865	.032	26.952	***	.676	.457
q23x2_13	<---	Allo	.855	.031	27.315	***	.684	.468
q23x2_12	<---	Allo	.857	.033	26.344	***	.662	.439
q23x1_5	<---	Allo	.754	.040	19.000	***	.489	.239
q23x2_14	<---	Allo	.824	.042	19.589	***	.504	.254
Emotion			CR = 0.955 AVE = 0.704					
q16_9	<---	Emotion	1.000				.870	.756
q16_8	<---	Emotion	.987	.021	47.848	***	.864	.746
q16_7	<---	Emotion	.885	.023	37.960	***	.759	.576
q16_6	<---	Emotion	.967	.022	44.016	***	.827	.684
q16_5	<---	Emotion	1.018	.020	52.071	***	.900	.810
q16_4	<---	Emotion	1.003	.021	48.418	***	.869	.755
q16_3	<---	Emotion	1.011	.020	50.261	***	.885	.783
q16_2	<---	Emotion	.977	.022	45.425	***	.841	.707
q16_1	<---	Emotion	.798	.023	34.974	***	.721	.519
Behavioral intention (BI)			CR = 0.912 AVE = 0.723					
q22_1	<---	BI	1.000				.871	.758
q22_2	<---	BI	.899	.023	38.955	***	.787	.620
q22_3	<---	BI	1.036	.022	47.797	***	.887	.786
q22_4	<---	BI	.918	.021	44.645	***	.853	.727
$\chi^2 = 1941.758$ , $df = 371$ , GFI = .917, CFI = .951, RMSEA = .051								

**Table 5.** Discriminant validity of measurement scale from CFA

	Correlations			
	Psycho	Allo	Emotion	BI
Psycho	0.563			
Allo	-.199	0.443		
Emotion	-.277	.465	0.704	
BI	-.235	.733	.521	0.723

*Note:* Numbers on the diagonal refer to average variance extracted (AVE); numbers below the diagonal refer to inter-construct correlations.

**Table 6.** Path analysis

H	Paths	Supported or rejected
H1	Psychocentric personality – Behavioral intention	B = -.068, $t = -3.316$ , $p < .001$
H1	Allocentric personality – Behavioral intention	B = .622, $t = 22.300$ , $p < .001$
H2	Emotion – Behavioral intention	B = .220, $t = 9.477$ , $p < .001$
H3	Psychocentric personality – Emotion	B = -.206, $t = -8.271$ , $p < .001$
H3	Allocentric personality – Emotion	B = .434, $t = 16.177$ , $p < .001$

**Table 7.** Mediation test results

Relationship	Direct effect without mediator	Effect with mediator	Result
Psycho – Emotion - BI	-.068***	-.045*	Partial mediation
Allo – Emotion - BI	.622***	.095*	Partial mediation

\*\*\*  $p < .001$  \*  $p < .05$