Classification of senior tourists according to personality traits

Abstract

This research aims to conduct a cross cultural study of Mainland Chinese and the United States (U.S.) seniors' personality traits and identify how they affect motivation, preferences, sociodemographic, and travel-related characteristics. Using samples of 496 Mainland Chinese and 532 U.S. senior responses, this research determined that three personality traits (psychocentric, midcentric, and allocentric) described U.S. senior participants and two personality traits (psychocentric and midcentric) described Mainland Chinese senior participants. Using a series of analytical tools including one-way ANOVA, regression, independent sample t-test, and chi-square tests, differences between senior tourists' personality traits and other variables were determined across U.S. and Mainland Chinese senior samples and across the measurement constructs. Practical implications are discussed and recommendations for future research are provided.

Keywords: personality; psychographic; seniors; China; United States; COVID

Introduction

Senior travel has become topical among researchers and its potential to become the engine of tourism in the future has now emerged as an overgeneralized cliché. Studies projecting the value and potential contributions of the senior tourism market towards global economic development point to senior tourism as a solution to peak visitor spending and to counter balance off season problems and thereby creating economic stability for tourism suppliers and destinations (Hunter-Jones & Blackburn, 2007), a booster of health and wellbeing among the elderly (Hwang & Lee, 2019a; Patuelli & Nijkamp, 2016), and to function as a catalyst for an optimal quality of life (Hsu, Cai, & Wong, 2007; Oliveira, Brochado, & Correia, 2018). Additionally, senior tourism as a special niche is a suitable substitute to compensate for the imbalance of destinations' tourist receipts that traditional sea-sun-sand resorts and destinations suffer (Garau-Vadell & de Borja-Solé, 2008).

Against the background of projected value and contribution to global tourism, important gaps persist. First, personality traits are not adequately explored across different forms of tourism niches as few empirical psychographic studies have been conducted. Typically, studies explore food-related personality (Baah, Bondzi-Simpson, & Ayeh, 2019; Mak, Lumbers, Eves, & Chang, 2017), destination brand personality (Murphy, Benckendorff, & Moscardo, 2007) and tourist personality traits in general (Dedeoğlu, Okumus, Yi, & Jin, 2019; Ekinci & Hosany, 2006). However, studies aimed at understanding personality traits for specific market segments are few; the results of which include the inability to identify tourists needs and wants, target appropriate segments, and develop policies along with advertisement campaigns for specific target markets.

Secondly, although there is large agreement regarding the heterogeneity of the senior tourism market, there are questions regarding the extent of this diversity. The extent of variation among senior tourists were previously explored in terms of motivation (Otoo & Kim, 2020; Ward, 2014), travel characteristics (Alén, Losada & de Carlos, 2017; Caber & Albayrak, 2014), information technology usage (Pesonen, Komppula & Riihinen, 2015) and destination choice decisions (Wu, Zhang & Fujiwara, 2011). Meanwhile, researchers have noted the importance of profiling consumers according to their personality profile while emphasizing the need to establish how personality affect behavior and preferences (Di Fabio & Kenny, 2018; Hirsh, 2010).

Thirdly, research into senior travel is mixed with inconsistencies in terms of establishing common behavior patterns (Patuelli & Nijkamp, 2016). Although studies (e.g., Backman, Backman & Silverberg, 1999; Moisey & Bichis, 1999) support that psychographic segments are useful to differentiate the tourism market, there is need for empirical validation of *a priori* theoretical foundations for the senior market and more so in an era of the global pandemic neologized as COVID-19. Therefore, identifying distinct segments within the senior tourism market can be valuable to tourism businesses, tourism destinations, and tour companies and its implications meaningful to understanding post-COVID-19 travel. Plog's psychographic concept is valuable for this type of inquiry (Plog, 1974; 1987; 2002). Plog (2002, p.245) argued that identifying tourists' position on an allocentric-psychocentric continuum could explain travel behavior, travel product preference, destination preferences, experiences sought, and advertising appeals.

Finally, the influence of sociopsychological attributes such as motivation and preferences were previously examined as predictors of tourist behavior and characteristics. It is important to

identify how personality traits predict these variables as well as sociodemographic and travel-related features. This research attempts to explore the personality traits of seniors across overseas travel motivations, preferences, sociodemographic and travel-related features. In addition, earlier psychographic studies were conducted without adequate evaluation across sample groups of tourists. This knowledge would have served as a means of cross-validation. As a result, previous psychographic studies failed to produce comparable results. To mitigate this gap, this study considers seniors from the U.S. and Mainland China as these represent the largest elderly populations and are projected to have the largest demand for travel (Hsu & Kang, 2009; Hwang & Lee, 2019a).

This research involves a cross cultural study of U.S. and Mainland Chinese seniors' personality traits to better understand how they affect motivations, preferences, sociodemographic, and travel-related characteristics. The study's specific objectives are to: 1) identify the personality traits of U.S. and Mainland Chinese seniors; 2) assess the extent of difference between seniors' personality traits and their overseas travel motivation; 3) investigate the differences in personality traits of seniors across their travel preferences and future tourism intentions; and 4) to explore the differences in seniors' personality traits across their sociodemographic and travel-related features. Understanding the nature of senior tourists' personality traits and its implications for motivation, preferences, and sociodemographic along with travel-related features is beneficial and will ensure that their concerns and interests are considered in marketing, promotion, and policy development as well as enabling further understanding among their unique similarities and differences. The implications are also valuable to a post-CCOVID-19 tourism.

Literature review

Global senior travel market

Various terms apply to the senior travel segment, including elderly tourists (Alén et al., 2017; Woo, Kim, & Uysal, 2016), young-old – old - very old (Backman et al., 1999; Hong, Kim, & Lee, 1999), pre-seniors/prospective seniors (Caber & Albayrak, 2014; Vigolo & Confente 2013), grey nomads/grey tourists (Onyx & Leonard, 2005) and veteran-mature market (Norman et al., 2001). Meanwhile, it is commonly applied that senior tourists are persons aged 55 years or above (Otoo & Kim, 2020).

Apart from their age, the senior market demonstrates characteristics different from their younger counterparts in terms of travel activities, preferences, motivations, and interests (Fleischer & Pizam, 2002; Hwang & Lee, 2019b; Śniadek, 2006). In Canada, the Ministry of Industry reported that 9 out of 10 seniors engaged in passive leisure activities (Arriagada, 2018). In the United States, the Pew Research Center reports that there were about 71 million Baby Boomers (aged 50 to 70) in (Fry 2018). Further, AARP reported that Baby Boomers were more likely to take four to five leisure travels in 2019, with half of these combining domestic and overseas travel (Gelfeld 2018). In China, the mature and senior population collectively constitute 15% of outbound travel (United Nations World Tourism Organization, 2019).

In addition, travel contributes non-economic benefits to senior tourists. It is an opportunity for social identity seeking and bonding (Hunter-Jones & Blackburn, 2007; Kim, Lee, & Bonn, 2016), improving psychological and physical wellbeing (Hsu et al., 2007; Oliveira et al., 2018), as well as re-living youthful dreams and nostalgia (Otoo & Kim, 2020; Sellick, 2004). Meanwhile, there are concerns that seniors may decrease participation in active leisure pursuits. In Canada for example, the participation rate of senior women in active pursuits waned from

77% to 69% between 1986 and 2015 (Arriagada, 2018). In Europe, it is reported that 52% of seniors aged 65+ did not participate in tourism in 2014 (Eurostat, 2019).

Consumer psychographic research

A major research interest in psychology related to personality development is consumer psychographic research, and researchers were primarily absorbed in the development and validation of personality assessment scales. Studies show that personality traits play a significant role in affecting sociopsychological attitudes and behaviors (e.g., Dedeoğlu et al., 2019; Mak et al., 2017) and are relevant to identifying the uniqueness and differences among a seemingly homogenous subset (Di Fabio & Kenny, 2018; Hirsh, 2010). Psychographic studies are meaningful for describing consumers, identifying emerging trends, advancing the development of consumer typologies (Kattiyapornpong & Miller, 2011) as well as reflecting activities, interests, and opinions among consumers (Cruz-Milan, 2018).

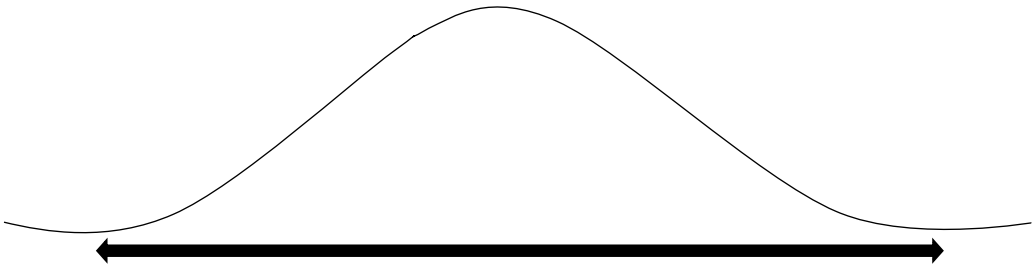
Research also demonstrates that psychographic scales can be useful in the classification of vacation lifestyles among tourists (Backman et al., 1999; Cruz-Milan, 2018). Tourist personality traits or psychographics refer to a set of characteristics associated with tourists that exert pervasive influence on a broad range of tourist choices and behaviors. Typology studies in tourism suggest that tourists can be segmented on a continuum based on the degree of activeness, familiarity, or engagement in travel.

Application of personality traits to tourism research

Two of the earliest attempts at developing a typological model of tourists were by Cohen (1972) and Plog (1974). In his study, Cohen identified a four-tier typology of tourists based on the degree of institutionalization. Cohen's continuum of tourists comprises organized mass

tourists, individual mass tourists, explorers, and drifters. The high institution-dependent tourist (i.e. organized mass tourist) seeks little adventure at destinations and takes solace in their "environmental bubble" throughout the trip. On the other end, drifters go beyond the familiar milieu and farther away from routine ways of life. For the drifter tourist, there is little to no dependence on a fixed itinerary or travel intermediaries (Cruz-Milan, 2018).

Stanley Plog's allocentric-psychocentric typology has been greatly cited in tourism research and books over the decades and is applied as a general framework for predicting phases of tourism behavior. Plog's (1974) typology was based on tourists' psychographics on a continuum of allocentrism and psychocentrism; reflecting travelers' activities, preferences and perceived risk of tourism involvement at a destination. According to this typology, psychocentrics, similar to Cohen's 'organized mass tourists', have a preference for familiar settings, experiences, destinations and activities common to what they are accustomed to. They seldom travel to unexplored places, have territorial boundedness and have generalized anxieties and a sense of powerlessness (Plog, 1974). By contrast, allocentric tourists prefer a high amount of novelty, adventure, or risk in their travel. Despite its general applications, few studies have attempted to understand Plog's psychographic application to specific tourism types (Brown & Lehto, 2005; Griffith & Albanese, 1996). Plog revised his concept including relabelling allocentrics as venturers and psychocentrics as dependables on the basis of venturesomeness. Venturers tend to be adventure driven, novelty seekers, frequent travellers, and active participants in a wider range of activities; all of which are opposite to dependables (Plog, 2002). A summary of the revisions and current applications (Merritt et al., 2018; Plog, 2002) are provided in Figure 1.



Degree of novelty	Psychocentric	Near psychocentric	Midenctric		Near allocentric	Allocentric
Venturesomeness	Dependable	Near dependable	Centric dependable	Centric venturer	Near venturer	Venturer
Authenticity	Autnentic	Mid authentic	Centric authentic	Centric venturer	Mid Venturer	Venturer
Pursuit	Traditional	Sightseer	Journeyer	Voyager	Pioneer	Venturer

Figure 1. Revisions to Plog's psychographic continuum

Plog's continuum is suitable for examination of tourist motivation and lifestyle variables such as tourist preference and travel style (Brown & Lehto, 2005; Cruz-Milan, 2018; Kim, Yilmaz & Choe, 2019). Plog's continuum provides a more suitable interpretation of the motivation for overseas travel as the tenets of the other models such as novelty and familiarity are implicit in Plog's theory. Despite several revisions to Plog's concept, the premise of his theorization remained unchanged and hinge on the foundational tenets of psychocentric-midcentric-allocentric tourist types (Suntikul, Agyeiwaah, Huang & Pratt, 2020; Lepp & Gibson, 2008; Kim et al., 2019; Plog, 2002). In addition, the distribution of tourist types remained normally curved, between 2.5% to 4% venturers or dependables, approximately16% near venturers or near dependables, and roughly 62% as divided between centric dependables and centric venturers.

Meanwhile, Plog's theory was critiqued in terms of the following: First, Plog's continuum was traditionally applied to understand destination lifecycle. In this paper, we explore

the applicability of the theory to individual characteristics such as activity preference, sociodemographic traits, preferred type of tourism among other variables. Second, Plog's theory typically assumes normal distribution curve (a bell-shaped curve). However, as other lifecycle models have suggested - example, Butler' tourist area lifecycle (Lee & Weaver, 2014), tourist and tourism developments may assume diverse trends. Third, the model is cliqued for lack of generalisability to a global context as variables are manipulated by a single market; typically, the US (Litvin, 2006; McKercher, 2006). Thus, a cross-cultural evaluation as undertaken by this study is a valuable contribution to literature.

Fourth, some scholars contend the extent to which personality types of travellers influences their destination choices – arguing that market-specific attribute rather than destinations influence travel (Ho & McKercher, 2015; McKercher, 2006). Smith (1990) also showed some deviation from Plog's continuum having found no significant difference between incomes of allocentrics and psychocentrics among seven countries. However, Kim et al. (2019) showed that message-personality congruity had a significant influence on visit intention via attitudes as mediators. As empirical research on Plog's psychographic model has yielded varied and inconclusive outcomes (Cruz-Milan, 2018), a question seldom addressed in the literature is 'Do persons in specific market possess the same personality?' in ascertaining answers to these questions, we examine how personality types can be explored within particular markets and the extent to which these inform their characteristics as well as influence preferences.

Travel personality traits and its linkage with other variables

The interlinkages between tourists' personality traits and other variables have remained complex. Travel motivations, preferences, and visitor characteristics are proliferated research

concepts but few attempts have been made to clearly link these to sociological theories. Most studies, for example, consider motivation as a precursor to travel (e.g., Alén et al., 2017; Hsu & Kang, 2009; Otoo, Kim & Choi, 2020a, b; Ward, 2014). However, few researchers understand that personality traits are vital to determining motivation status (e.g., Abbate & Di Nuovo, 2013; Mak et al., 2017), preferences (e.g., Kattiyapornpong & Miller, 2011; Merritt et al., 2018), or visitor characteristics (Roberts & DelVecchio, 2000). For example, Roberts and DelVecchio (2000) found a negative correlation between variables such as age and extraversion (allocentricism) and concluded that elderly tourists were more likely to avoid risks.

At the same time, a weakness in the application of Plog's (1974) psychographic theory is its failure to incorporate the influence of socio-demographic and travel-related variables. Thus, a major critique of earlier applications of Plog's model is the failure to account for different variables other than tourist roles and lifestyles among tourists (Huang & Hsu, 2009; Litvin, 2006). Scholars have challenged the extent to which Plog's model explains tourist motivations and predicts tourist behavior (e.g., Huang & Hsu, 2009). Nevertheless, Plog's continuum is credited for its ability to communicate efficiently while avoiding complex multivariate formulations (Pearce, 1993).

Method

The Mainland Chinese and U.S. senior market

The target populations for this study are seniors in mainland Chinese and U.S. because as Figure 2 shows those in the two countries predominantly have been increasing. Given the increase in the senior population and the expected exponential increase by 2050 as depicted in Figure 2, researchers have questioned why the senior travel segment has lagged behind in

attracting seniors or why research output fails to mirror the reported potential of this market (Hsu et al., 2007; Small, 2003). Surprisingly, Chinese seniors (55 years or above) are reported to pay a significant and premium amount for participation in package tours and in some circumstances, their proportion of participation cannot not exceed 20% of the group (Hsu et al., 2007). Nella and Christou (2016) similarly reported that the U.S. senior market were largely neglected by the marketing community in favor of younger markets. Now that U.S. and Mainland China are important senior markets, the study is delimited to these populations.

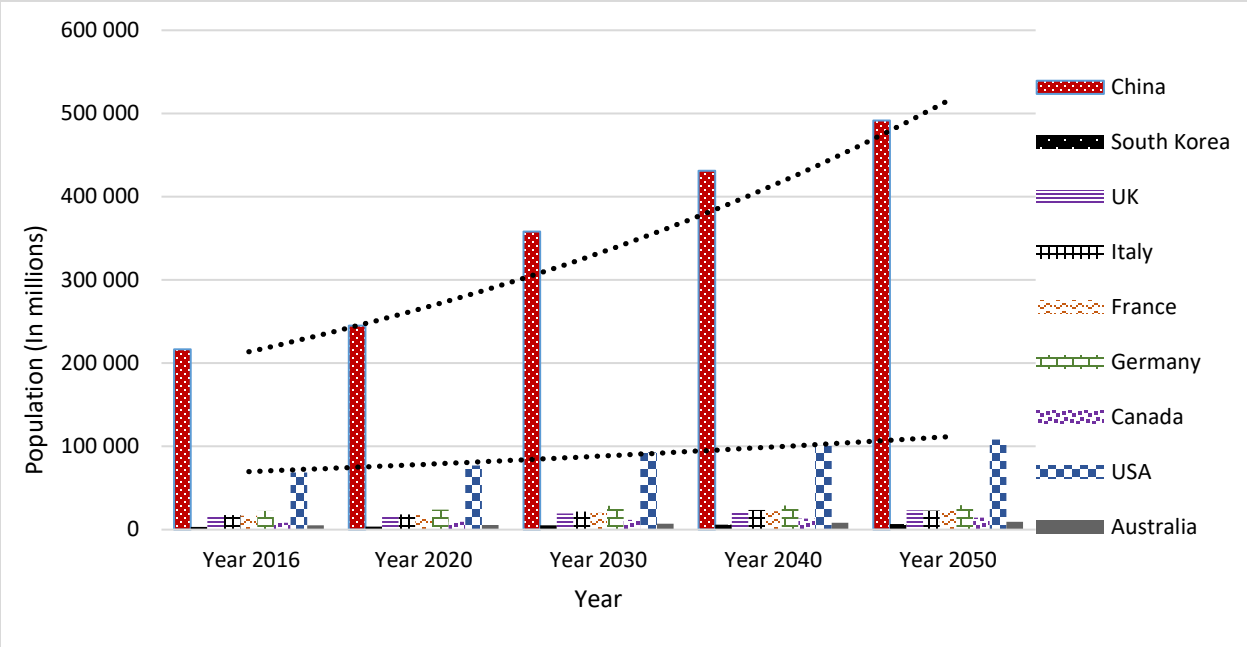


Figure 2. Population up to 2050

Data source: United Nations (2017).

In the particular case of China, some attention has already been drawn to the potential of this market to contribute substantially to the senior tourism market (CTA, 2014; Hsu et al., 2007). China's aging structure is expanding faster than any other country, as depicted in Figure 1 using data from United Nations (2017). Others have report that Chinese aged over 59 years

already constitute a tenth of the world's population (e.g., Miao & Wu, 2004). In 2017, the number of middle-aged and senior Chinese outbound tourists increased to 30 million with an annual growth rate of 44.2% (China Tourism Academy, 2018). The senior Chinese population are also expected to surge in their demand for overseas travel. Chinese baby boomers born in the 1950s and 1960s under the one child policy are able to better save and spend their discretionary income on travel (Huang & Xu, 2018).

As for U.S. seniors, they are reported to be sophisticated, experienced, and highly educated travelers whose motivations are comprised of the desire to seek escape, stimulate senses, and socialization (Alen et al., 2017; Nella & Christou, 2016; Otoo et al., 2020b). The U.S. seniors, dominated by the baby boomers' generation cohort, wield a greater amount of wealth and time (Littrell, Paige & Song 2004; Patterson, 2018; Śniadek, 2006). The American Association of Retired People (AARP) in the U.S. forecasted that seniors were likely to be involved in active leisure pursuits with an estimated four to five leisure trips in 2015 (Patterson, 2018). Research indicates that U.S. seniors undertake varied forms of international travel, including journeying as adventurer tourists for which one in two seniors were likely to engage in adventure tourism, shopping tourism, and sightseeing activities (Littrell et al., 2004; Patterson, 2018).

Measurement

A number of items were used to design and measure the study's constructs. Particularly, items for measuring personality traits were identified from previous tourism literature (Keng & Cheng, 1999; Mo, Howard & Havitz, 1993). They included "I prefer to take safe travel choices," "I prefer to receive help from others in arranging travel plan," and "I prefer to choose a guided

tour at a destination". Items to measure senior tourists' motivations were drawn from past studies (Alén et al., 2017; Hsu & Kang, 2009; Lu et al., 2016; Musa & Sim, 2010; Ryu et al., 2015; Tiago et al., 2016; Wang, Wu, Luo & Lu, 2017; Ward, 2014). The measurement of senior tourists' preferences for tourism type, attraction type and activity type were extracted from previous studies (Lieux, Weaver, & McCleary, 1994; Wang et al., 2017). The items for measuring preference in overseas travel also took into account previous studies (e.g., Keng & Cheng, 1999). To measure overseas travel intentions, items were assembled from other studies (Lu et al., 2016; Wang et al., 2017). An operationalization to measure information technology acceptance was adopted from earlier studies (Kim, Kim, Kim, & Kim, 2016; Lieux et al., 1994)

The items to measure personality traits, motivations, preference for tourism type, preference for attraction type, preference for activity type, preference in overseas travel, overseas travel intentions, as well as information technology acceptance, were measured on a 5-point Likert-type scale (1="strongly disagree"; 5="strongly agree"). Socio-demographic (gender, age, marital status, educational level, income) and travel-related characteristics (travel duration, travel partner, accommodation type, travel arrangement type, information technology acceptance) were identified using categorical variables.

Data collection

A draft of questionnaire was firstly made in English and then was translated into Mandarin by three language experts at second author's university. As a method of a back-to-back translation method, two experts compared two versions to ascertain whether two language versions were consistent in meaning. A third expert validated the translations. Prior to undertaking the main survey, a pretest was conducted with 50 international doctoral students

majoring in tourism and hospitality who were fluent in English and Chinese. Then, some modifications to the research instrument such as wording (e.g. “elderly” to “senior”). Phrases which were considered sensitive were removed such as “while I am alive” and “while I am healthy”.

Next, two sets of pilot studies involving 100 U.S. seniors and 80 Mainland Chinese seniors were conducted using an online panel survey and a field survey, respectively. These were undertaken to enhance face and content validity (Hair, Black, Babin, & Anderson, 2010). An online panel was considered suitable for collecting data related to U.S. seniors informed by the fact that the U.S. sample was considered more educated and familiar with internet use (Alen et al., 2017; Nella & Christou, 2016; Otoo et al., 2020b). In addition, this approach was cost-advantageous, selected targeted samples within a short period, and ensured minimal errors in data entry (Van Selm & Jankowski 2006). After revising the questionnaire based on the pilot test, the main survey was designed to utilize a panel-based online data collection to solicit responses from U.S. seniors using a reputable online company, Qualtrics, in the U.S as adopted in some studies (example, Choe & Kim, 2019). This was necessitated by the fact that since seniors are statewide spread it is impossible to collect samples from all states in the U.S. In total, 532 U.S. questionnaires were usable for further analyses.

For the main survey on Mainland Chinese seniors, an on-site survey was conducted unlike data collection method for U.S. samples. The initial difficulty in applying the same criteria to the Mainland Chinese sample warranted a field survey. The reasons are that online survey system is not well equipped in China and seniors are not friendly with the internet and online survey. This approach was based on the grounds of reaching the target population in different provinces. Furthermore, the questionnaire was translated into Mandarin. Five research

assistants fluent in both English and Mandarin and resident in selected regions were trained over a period of two-weeks. The data collection was undertaken from June to September 2018 in Fujian, Guangdong, Jiangsu, Nanjing, Wuhu-Anhui, and Zhejiang. The reasons why these regions were selected include that they were metropolitan cities, easily accessible to international airports, and their residents are relatively affordable to travel abroad. The samples were selected from regional airports, railway stations, and community parks where seniors meet their friends or travel in domestic region. This approach was useful in order to diversify the scope of the Mainland Chinese seniors sampled. While 520 seniors were targeted for this main survey, 496 questionnaires were usable for analysis. The regional percentage distribution of the respondents are as follows: Guangdong (29.6), Fujian (4.6%), Jiangsu (4.3%), Wuhu–Anhui (13.5%), Nanjing (28.0%), and Zhejiang (20.0%). Overall, the sample sizes were theoretically adequate considering previous studies on Mainland Chinese and U.S. seniors (Lu et al., 2016; Otoo & Kim, 2020; Otoo et al., 2020b; Wang et al., 2017).

To deal with possible bias, common criteria was adopted including 55 years, an overseas travel within the recent past three years, and an interest in overseas travel (Otoo et al., 2020b). Thus, respondents in both populations were required to confirm their eligibility. To further ensure consistency in the data, their sociodemographic characteristics were compared and found to be similar to those reported in previous studies (Baloglu & Shoemaker, 2001; Hsu et al., 2007; Hsu & Kang, 2009; Wang et al., 2017; Shoemaker, 2000).

Data analysis

First, a frequency analysis was conducted to identify the characteristics of the U.S. and Mainland Chinese respondents. To determine respondents' personality scale, personality

attributes were reverse-coded and distributed according to mean values ranging from 1 to 4. The mean personality scores ranged between 1 to 5 where 1- 2.26 (psychocentric), 2.27-3.0 (midcentric) and 3.01-5.0 (allocentric). The summary of the outcome mean scores of personality attributes are shown in Table 1. A series of one-way analysis of variance (ANOVA) tests, regression, independent sample *t*-tests, and chi square tests were then conducted to examine the overall influence of motivation, travel preferences, sociodemographic characteristics, and travel related attributes across personality attributes. A series of Levene's tests to check the homogeneity assumption that the population variances of the dependent variable are equal for all groups were also performed. Where values were not significant at the .05 level, the homogeneity of variance assumption was not violated. Tukey's honestly significant difference (HSD) test was applied as post-hoc test to detect the sources of the difference across the respondent subgroups since it is considered more conservative (Hair et al., 2010).

Table 1. Statistics of US and Mainland Chinese senior personality traits

Personality attributes	USA		Mainland China	
	Mean	Std. Dev.	Mean	Std. Dev.
I prefer to take safe travel choices. (R)	1.76	.76	1.62	.63
I prefer to receive help from others in arranging travel plan. (R)	2.59	1.11	1.90	.76
I prefer to choose a short-haul travel. (R)	2.86	.91	2.34	.94
I prefer to spend less money at a destination. (R)	2.49	.93	2.28	.86
I prefer to choose a guided tour at a destination. (R)	2.79	1.11	2.26	.85
I prefer to travel to a country with similar culture. (R)	3.16	1.01	2.47	.90
I prefer to travel with other persons rather than independently. (R)	2.49	1.09	1.98	.85
I prefer to travel to where they have the same tourist infrastructure as in my country. (R)	2.10	.94	2.63	.86
I prefer to travel to a popular tourist destination. (R)	2.93	1.02	2.02	.78
I prefer to travel to a place with well-developed travel industries. (R)	2.63	.96	2.07	.82
I prefer to visit a fun destination. (R)	2.10	.86	2.21	.746

R = reverse coded; Mean personality scores 1 to 5 where 1- 2.26 (psychocentric), 2.27-3.0 (midcentric) and 3.01-5.0 (allocentric).

Findings

Demographic and travel-related profiles

Table 2 conveys the socio-demographic and travel-related characteristics of the respondents. Of the respondents from the U.S. and Mainland China, approximately 60% and 54% respectively were females. Accordingly, 60.7% and 81.7% were married. In terms of their age, the U.S. sample was dominated by the 60-64 age category (35%) and 45.6% for the Mainland China were in that category. Education level for the U.S. and Mainland Chinese respondents indicated that approximately 70% and 48% had attained secondary level education respectively. Meanwhile the majority of U.S. respondents were Caucasians (82%). The income category USD 40,000 – USD 79,99940 dominated both the U.S (40%) and Mainland Chinese (41%) samples.

As for their travel-related preferences, the U.S. seniors preferred a longer flight distance between 7 to 10 hours (47.93%) as opposed to 64% of the Mainland Chinese seniors who preferred a flight distance of less than 7 hours. A majority of the U.S sample (77.6%) preferred to spend 7 nights or more with regards to overseas travel. When asked about their previous overseas travel experience in the past three years, 63% of U.S. respondents had traveled once while 45% of Mainland Chinese respondents had traveled two to four times. Approximately half of the U.S. sample preferred to travel with their spouses, and 59% of the Mainland Chinese sample preferred the companionship of their family. In terms of their travel arrangement preference, 45.5% of the U.S. sample preferred to make their own travel arrangements whereas 39% of the Mainland Chinese sample preferred package tours. At the same time, there was a common preference for mid-priced accommodation among both samples (U.S.= 71.6%, Mainland China=54.6%).

Table 2. Socio-demographic and travel-related profiles of the respondents

Variables	U.S. (N=532) %	Mainland China (N=496) %
Gender		
Female	60.34	54.44
Male	39.66	45.56
Age		
55-59 years	31.58	45.56
60-64 years	34.96	28.63
65-69 years	26.50	14.52
70 years or above	6.95	11.29
Marital status		
Unmarried	39.29	18.35
Married	60.71	81.65
Level of education		
Primary school or less	26.50	22.78
Secondary/High school degree	70.11	47.58
College degree or above	3.38	29.64
Ethnic background		
Caucasian	82.08	-
African American	9.81	-
Asian/middle eastern	4.53	-
Hispanic	3.58	-
Annual household income after tax		
Less than USD40000	33.08	32.86
USD40,000 - USD79,999	40.41	41.13
USD80,000 - USD119,999	18.80	22.38
USD120000 or above	7.71	3.63
Preferred travel distance (flight hours)		
Less than 7 hours	26.69	64.11
7 to 10 hours	47.93	28.02
11 hours or above	25.38	7.86
Preferred travel duration		
Less than 4 nights	7.14	14.31
4 to 6 nights	15.23	39.72
7 nights or above	77.63	45.97
Number of overseas travel in past three years		
One time	63.15	38.10
Two to four times	29.89	44.76
Five times or more	6.96	17.14
Preferred travel partner		
Alone	12.78	7.86
Spouse	49.81	16.94
Friend	15.60	16.53
Family	21.80	58.67
Preferred travel arrangement option		
Own travel arrangement	45.49	23.39
Package tour	15.04	39.31
Own + Package tour	39.47	37.30

Preferred overseas accommodation type		
Budget/economy accommodation	19.17	32.26
Mid-priced accommodation	71.62	54.64
Upscale/ Luxury accommodation	9.21	13.10

Differences of U.S. seniors' overseas motivation according to typology

The mean scores of the three tourist typologies are presented with the outcome of motivation as demonstrated in the one-way ANOVA tests in Table 3. Significant differences were found for seven out of the eight motivation domains across the three tourist typology subsets at the .013 significance level after the Bonferroni-correction at the .1 level (.1/8= .013). Across nearly all motivation subsets, those U.S. seniors identified as psychocentrics displayed the highest mean scores. The post-hoc analyses indicated specific differences across the three tourist typologies regarding their motivation for "seeking a once-in-a-lifetime experience," "seeking self-esteem," "achieving a sense of socialization," "escaping," and "seeking time with family." Meanwhile, psychocentric and midcentric U.S seniors who reported motivations for "seeking knowledge/learning" and "seeking nostalgia" were different from those of the allocentric category.

Table 3. ANOVA analyses of U.S. seniors' overseas travel motivations according to typology

Overseas travel motivation	Psychocentric (n=222)	Midcentric (n=215)	Allocentric (n=94)	*F*-value	*P*-value
Seeking knowledge/learning	4.23a	4.03a	3.97b	5.69	.004
Seeking a once-in-a-lifetime experience	4.08a	3.83b	3.58c	17.93	.000
Seeking self-esteem	3.30a	2.82b	2.30c	54.78	.000
Experiencing culture/nature	4.49	4.44	4.43	0.49	.616
Achieving a sense of socialization	3.74a	3.45b	3.19c	21.01	.000
Escaping	3.58a	3.26b	2.77c	27.49	.000
Seeking nostalgia	2.88a	2.53a	2.29b	11.01	.000
Seeking time with family	3.80a	3.53b	3.10c	16.71	.000

* Likert 5-point scale including "strongly disagree" (1), "neutral" (3), "strongly agree" (5)
a, b, c indicate source of mean differences as results of Tukey's HSD test (c < b < a) after using Bonferroni-correction method at the 0.045 significance level (0.1/8 = .013).

In terms of overall effect, results of the regression analysis revealed significant differences across three motivation domains among the psychographic traits. Specifically, differences were observed for the domains "seeking self-esteem" (t= -5.767; p= 000), "escaping" (t= -2.218; p=.027), and "seeking time with family" (t= -3.287; p= .001). The negative effects suggest that for the three domains, respondents were more likely to be psychocentrics as exhibited in Table 4.

Table 4. Regression analysis of U.S. seniors' overseas travel motivations according to typology

Overseas travel motivation	β	t-value	p-value
Seeking knowledge/ learning	.04	.64	.525
Seeking a once-in-a-lifetime experience	-.09	-1.60	.110
Seeking self-esteem	-.25	-5.77	.000
Experiencing culture/nature	.11	1.82	.070
Achieving a sense of socialization	-.09	-1.96	.051
Escaping	-.09	-2.22	.027
Seeking nostalgia	.05	1.69	.092
Seeking time with family	-.10	-3.29	.001

Differences of U.S. seniors' overseas motivation according to typology

To determine the differences across preferences and overseas travel intentions across U.S. senior typologies, a series of one-way-ANOVA were conducted. For the U.S. respondents, significant differences, at least at the .05 level were found between the set of items to measure tourism type, attraction type, and activity type. Concerning their preference for overseas travel, significant differences were found for the items "Preference in an overseas travel" and "I prefer to purchase as many gifts as I can at a destination" across U.S. senior tourist typologies at the .01 significance level. Tukey's HSD test illustrated specific points of significant differences as presented in Table 5.

Table 5. ANOVA analyses of U.S. seniors' preferences and overseas travel intentions according to typology

Preferences and intentions	Psychocentric (n=222)	Midcentric (n=215)	Allocentric (n=94)	*F*-value	*P*-value
Preference for tourism type					
I prefer to engage in urban tourism.	3.52a	3.17a	3.11b	11.56***	.000
I prefer to engage in eco-tourism.	3.30a	3.08ab	2.95b	5.03**	.007
I prefer to engage in health tourism.	3.19a	2.60b	2.31c	35.11***	.000
I prefer to engage in cruise tourism.	3.38a	2.92b	2.15c	35.64***	.000
Preference for attraction type					
I prefer to visit historical attractions.	4.39a	4.14a	4.07b	7.74***	.000
I prefer to visit attractions of natural scenery.	4.45a	4.36ab	4.21b	3.81*	.023
I prefer to visit cultural attractions.	4.34a	4.18ab	4.05b	4.38*	.013
Preference for activity type					
I prefer outdoor activities at a destination.	3.79a	3.65ab	3.49b	3.44*	.033
I prefer shopping at a destination.	3.63a	2.96b	2.30c	51.36***	.000
I prefer dining at a destination.	4.26a	3.77b	3.32c	42.10***	.000
Preference in an overseas travel					
I prefer to have greater contact with local people at a destination.	3.82	3.62	3.69	2.60	.075
I prefer to visit a place where it requires a high travel budget.	2.68a	2.17b	1.80c	29.88***	.000
I prefer to purchase as many gifts as I can at a destination.	3.12a	2.40b	2.00c	40.12***	.000
I prefer to book air ticket or hotel using mobile or internet.	3.80	3.82	3.93	.59	.553
I prefer to search information using mobile or internet.	4.20	4.10	4.16	1.00	.369
Overseas travel intentions					
Interest in overseas travel	4.06	4.13	4.18	.58	.560
Intention to travel overseas in the next three years	3.88	3.92	4.05	.83	.435
Intention to recommend overseas travel	4.08	4.02	4.11	.35	.702
Intention to use travel technology/information	4.17	4.11	4.27	1.51	.221

Note: Likert 5-point scale including "strongly disagree" (1), "neutral" (3), "strongly agree" (5).
a, b, c indicate source of mean differences as results of Tukey's HSD test (c < b < a).
*p< .05, **p<.01, ***p<.000

Differences of U.S. seniors' socio-demographic and travel-related features according to typology

A series of chi-square tests were conducted to examine if there were differences between socio-demographic and travel-related features of the U.S. sample and their typologies. As presented in Table 6, significant differences were identified at least at the .05 level of significance regarding marital status, ethnic background, annual household income after tax,

preferred travel duration, preferred travel partner, and the preferred travel arrangement option. However, significance differences were not found at the 0.5 significance level for gender, age, preferred travel distance by flight hours, number of previous overseas travel in past three years and preferred overseas accommodation type.

Allocentric U.S. seniors were comprised of being unmarried (47.3%), Caucasians (93.4%), a preference for 7 nights or more for overseas travel (85.1%), preference for travel alone (26.4%), relatively high income (11.7%), and own travel arrangement (80.6%). Psychocentric U.S. seniors were found to be African Americans (14.0%), Asian/Middle eastern (7.0%), and to a lesser extent Hispanics (4.2%). They were also income earners of less than USD 40,000 (39.2%) with a preferred length of stay between 4 to 6 days (19.4%). Psychocentrics also preferred to travel with their family (31.3%) and preferred to use their own/package tour (51.2%) or a complete package tour (23.7%). As for Midcentrics, they were noted to be married (66.7%), income group of USD40,000 - USD79,999 (45.1%) and preferred to travel with their spouse (56.3%).

Table 6. Chi-square analyses of U.S. seniors' socio-demographic and travel-related features according to typology

Variables	Psychocentric (n=222)	Midcentric (n=215)	Allocentric (n=94)	Chi-square	*p*-value
Gender					
Female	65.3%	59.1%	51.1%	5.816	.050
Male	34.7%	40.9%	48.9%		
Age					
55-59	33.8%	33.0%	22.3%		
60-64	32.0%	39.1%	31.9%	11.657	.070
65-69	26.1%	22.3%	37.2%		
70 or above	8.1%	5.6%	8.5%		
Marital status					
Unmarried	41.9%	33.3%	47.3%	6.299	.043
Married	58.1%	66.7%	52.7%		
Level of education					
Primary school or less	2.3%	3.3%	5.3%		
Secondary/High school degree	28.4%	28.8%	17.0%	6.788	.148
College degree or above	69.4%	67.9%	77.7%		

Ethnic background					
Caucasian	74.9%	89.1%	93.4%		
African American	14.0%	6.2%	4.4%		
Asian/middle eastern	7.0%	3.3%	1.1%	23.639	.001
Hispanic	4.2%	1.4%	1.1%		
Annual household income after tax					
Less than USD40000	39.2%	25.6%	35.1%		
USD40,000 - USD79,999	38.7%	45.1%	34.0%		
USD80,000 -119,999	18.0%	19.5%	19.1%	15.668	.016
USD120000 or above	4.1%	9.8%	11.7%		
Preferred travel distance (flight hours)					
Less than 7 hours	24.3%	26.5%	24.5%		
7 to 10 hours	43.7%	52.6%	47.9%	7.046	.133
11 hours or above	32.0%	20.9%	27.7%		
Preferred travel duration					
Less than 4 nights	7.2%	4.7%	2.1%		
4 to 6 nights	19.4%	11.6%	12.8%	10.121	.038
7 nights or above	73.4%	83.7%	85.1%		
Number of previous overseas travel in past three years					
One time	63.5%	65.1%	57.4%		
Two to four times	29.3%	28.4%	35.1%	1.781	.776
Five times or more	7.2%	6.5%	7.4%		
Preferred travel partner					
Alone	5.1%	8.9%	26.4%		
Spouse	46.3%	56.3%	50.5%		
Friend	17.3%	17.4%	9.9%	46.557	.000
Family	31.3%	17.4%	13.2%		
Preferred travel arrangement option					
Own travel arrangement	25.1%	52.6%	80.6%		
Package tour	23.7%	7.9%	3.2%	94.986	.000
Own + Package tour	51.2%	39.5%	16.1%		
Preferred overseas accommodation type					
Budget/economy accommodation	21.8%	18.1%	17.2%		
Mid-priced accommodation	70.4%	74.9%	73.1%	1.933	.748
Upscale/ Luxury accommodation	7.9%	7.0%	9.7%		

Differences of Mainland Chinese seniors' overseas motivation according to typology

A mean score analysis of the psychographic variables revealed mean scores ranging from 1.0 to 2.7, which indicate Mainland Chinese respondents were mainly psychocentrics and midcentrics. A series of independent sample *t*-test tests were also performed to identify the mean differences in travel motivations on the two resulting tourist typologies of Mainland Chinese seniors (psychocentric and midcentrics) as shown in Table 7. Significant differences were found

among all eight motivation domains across the two typologies of seniors at least at the .05 level of significance. Across all motivation domains, psychocentrics were also noted to have higher levels of motivation.

Table 7. T-test analyses of Mainland Chinese seniors' overseas travel motivations according to typology

Overseas travel motivation	Psychocentric (n=223)	Midcentric (n=272)	*F*-value	*t*-value	*p*-value
Seeking knowledge/ learning	4.1**5**	3.73	.01	7.24***	.000
Seeking a once-in-a-lifetime experience	4.17	3.73	.02	7.31***	.000
Seeking self-esteem	3.83	3.31	.65	7.65***	.000
Experiencing culture/nature	4.25	3.96	4.34	5.35***	.000
Achieving a sense of socialization	3.96	3.49	6.08	7.31***	.000
Escaping	3.51	3.08	26.41	5.09***	.000
Seeking nostalgia	3.22	3.04	11.69	2.32*	.021
Seeking time with family	4.39	4.10	.62	4.46***	.000

Note: Likert 5-point scale including "strongly disagree" (1), "neutral" (3), "strongly agree" (5).
*p< .05, ***p< .000

As for the overall effect of Mainland Chinese seniors' typology and overseas travel motivations as displayed in Table 8, a regression analysis indicated significant differences across three motivation domains among the psychographic typologies. Those differences were detected for the domains "seeking knowledge/learning" (t= -2.104; p= .036), "seeking self-esteem" (t= -2.599; p= .010), "seeking time with family" (t= -2.204; p= .028).

Table 8. Regression analysis of Mainland Chinese seniors' overseas travel motivations according to typology

Overseas travel motivation	β	*t*-value	*p*-value
Seeking knowledge/ learning	-.084	-2.10*	.036
Seeking a once-in-a-lifetime experience	-.060	-1.44	.152
Seeking self-esteem	-.100	-2.60*	.010
Experiencing culture/nature	-.061	-1.52	.129
Achieving a sense of socialization	-.052	-1.31	.189
Escaping	-.005	-.17	.867
Seeking nostalgia	.048	1.75	.081

Seeking time with family	-.065	-2.20*	.028

*p<.05

Differences of Mainland China seniors' overseas motivation according to typology

To explore differences for their preferences and overseas travel intentions across Mainland Chinese senior typologies, a series of independent sample *t*-tests were conducted. Significant differences, at least at the .01 level were established between the set of items to measure tourism type, attraction type, and activity type. In terms of their preference for overseas travel, significant differences at the .01 level were found for the items "I prefer to have greater contact with local people at a destination," and "I prefer to visit a place where it requires a high travel budget" and at the .05 level for the item "I prefer to purchase as many gifts as I can at a destination." For their overseas travel intentions, significant differences (at least at the 0.1 significance level) were found in terms of "Interest in overseas travel," "Intention to recommend overseas travel" and "Intention to travel overseas in the next three years." The results are depicted in Table 9.

Table 9. *T*-test analyses of Mainland Chinese seniors' preferences and overseas travel intentions according to typology

Preferences and intentions	Psychocentric (n=223)	Midcentric (n=272)	*F*-value	*t*-test	*p*-value
Preference for tourism type					
I prefer to engage in urban tourism.	3.79	3.39	4.658	5.47	.000
I prefer to engage in eco-tourism.	4.04	3.60	16.525	7.05	.000
I prefer to engage in health tourism.	4.15	3.83	1.991	5.04	.000
I prefer to engage in cruise tourism.	3.77	3.24	3.293	5.86	.000
Preference for attraction type					
I prefer to visit historical attractions.	4.05	3.67	12.976	5.60	.000
I prefer to visit attractions of natural scenery.	4.21	3.85	.126	5.75	.000
I prefer to visit cultural attractions.	4.11	3.71	8.261	5.96	.000
Preference for activity type					
I prefer outdoor activities at a destination.	3.82	3.53	2.664	4.13	.000
I prefer shopping at a destination.	3.39	3.06	14.291	3.51	.000
I prefer dining at a destination.	3.86	3.50	.182	4.54	.000
Preference in an overseas travel					

I prefer to have greater contact with local people at a destination.	4.05	3.53	7.553	7.03	.000
I prefer to visit a place where it requires a high travel budget.	2.84	2.51	.333	3.61	.000
I prefer to purchase as many gifts as I can at a destination.	3.28	3.03	18.676	2.56	.011
I prefer to experience adventure activities at a destination.	2.90	2.85	11.413	.53	.595
I prefer to book air ticket or hotel using mobile or internet.	3.22	3.19	7.393	.28	.778
I prefer to search information using mobile or internet.	3.38	3.34	6.320	.35	.725
Overseas travel intentions					
Interest in overseas travel	4.15	3.86	2.981	3.84	.000
Intention to travel overseas in the next three years	4.03	3.75	8.216	3.46	.001
Intention to recommend overseas travel	4.12	3.87	1.092	3.60	.000
Intention to use travel technology/information	3.11	3.08	4.093	.35	.724

* Likert 5-point scale including "strongly disagree" (1), "neutral" (3), "strongly agree" (5)

Differences of Mainland Chinese seniors' socio-demographic and travel-related features according to typology

To determine if differences existed between socio-demographic and travel-related features of the Mainland Chinese sample and their typologies, a series of chi-square tests were conducted. The results, reported in Table 10, indicate that significant differences were identified at the .05 level of significance on preferred travel distance, preferred travel duration, preferred travel partner and preferred travel arrangement option, as well as preferred overseas accommodation type. However, no statistical differences were found at the .05 level of significance for socio-demographic features including age, gender, marital status, level of education, and annual household income.

Table 10. Chi-square analyses of Mainland Chinese seniors' socio-demographic and travel related features according to typology

	Psychocentric (n=223)	Midcentric (n=272)	Chi-square	*p*-value
Gender				
Female	51.1%	57.0%	1.698	.192
Male	48.9%	43.0%		

Age				
55-59	44.9%	49.2%		
60-64	31.8%	27.7%	1.165	.558
65-69	23.4%	23.1%		
70 or above	0.0%	0.0%		
Marital status				
Unmarried	20.9%	15.4%	2.476	.116
Married	79.1%	84.6%		
Level of education				
Primary school or less	18.0%	22.3%		
Secondary/High school degree	53.9%	45.1%	3.794	.150
College degree or above	28.1%	32.6%		
Annual household income after tax				
Less than USD40,000	30.5%	34.9%		
USD40,000 - USD79,999	38.6%	43.0%		
USD80,000 -119,999	26.0%	19.5%	5.524	.137
USD120,000 or above	4.9%	2.6%		
Preferred travel distance (by hours)				
Less than 7 hours	70.9%	69.5%		
7 to 10 hours	26.9%	23.5%	6.276	.043
11 hours or above	2.2%	7.0%		
Preferred travel duration				
Less than 4 nights	19.1%	30.1%		
4 to 6 nights	29.5%	29.4%	8.979	.011
7 nights or above	51.4%	40.5%		
Number of previous overseas travel in past three years				
One time	35.9%	39.7%		
Two to four times	45.3%	44.5%	1.144	.564
Five times or more	18.8%	15.8%		
Preferred travel partner				
Alone	1.9%	2.0%		
Spouse	23.1%	13.8%		
Friend	18.9%	16.5%	8.429	.038
Family	56.1%	67.7%		
Preferred travel arrangement option				
Own travel arrangement	27.9%	19.5%		
Package tour	41.1%	38.0%	8.059	.018
Own + Package tour	31.1%	42.5%		
Preferred overseas accommodation type				
Budget/economy accommodation	23.5%	38.9%		
Mid-priced accommodation	59.0%	50.9%	14.975	.001
Upscale/ Luxury accommodation	17.5%	10.2%		

Discussion and implications

The goal of this study was to understand the U.S. and Mainland Chinese seniors' travel personality traits according to their specific overseas travel motivations, preferences, intentions,

socio-demographic, and travel-related characteristics. The study reveals important differences both within and across U.S. and Mainland Chinese senior groups. The major findings are as follows: First, the mean scores of senior tourists' personality traits reveal that U.S. seniors satisfy a three-point tourist typology (psychocentric, midcentric, allocentric). According to Plog's (1974) personality continuum, two personality profiles describe Mainland Chinese seniors - psychocentricism and midcentricism. The implication is that Mainland Chinese seniors are less likely to undertake overseas travel involving longer and remote destinations, adventure-related travel, or deep contact with unfamiliar culture. This is further illustrated by their preference for shorter travel distances by flight, dependence on package tour, and shorter lengths of stay at the destination.

Second, the study suggests that while psychocentric seniors in both the U.S. and Mainland Chinese subsets exhibit similar preferences for tourism, attraction, and activity types, those of the Mainland China sample showed higher interest for overseas travel. This is an intriguing finding given that travel among Chinese seniors was previously identified as demonstrating socially irresponsible pursuits (Hsu et al., 2007; Ryan, 2010) that indicates a shift from previous thinking of Western seniors dominating the senior travel market (Chen & Shoemaker, 2014; Otoo & Kim, 2020; Sellick, 2004). It is suggested that the tourism industry can gain advantage of the growing interest in overseas travel among Mainland Chinese seniors, particularly given the growing spending among Chinese tourists (United Nations World Tourism Organization, 2019).

Third, and in keeping with the calls to understand the bricolage between personality traits and sociodemographic variables (Roberts & DelVecchio, 2000), the study found that females were the dominant psychographic group for overseas travel. Given that psychocentricism is

associated with risk aversion, the current finding suggests that married female seniors can be effectively associated with Plog's psychocentric and midcentric continuum respectively. This also provides theoretical support of previous studies which suggested that older married females tended to display less adventurous patterns (e.g. Lepp & Gibson, 2008).

Another important, but often neglected determinant of travel among seniors, relates to ethnic background. This current study identifies that among the U.S. cohort of seniors, Caucasians tended to be allocentric whereas those of the African-American cohort tended to be psychocentric. While this is a gray niche area in tourism studies, understanding the ethno-cultural implications of personality traits can determine the demand for certain types of holiday travel including the growing demand for diaspora tourism in Africa (Otoo et al., 2020).

Finally, the U.S. cohort of seniors demonstrated characteristics which are to a large extent synonymous to Plog's (1974) psychographic continuum. As expected, allocentrics tended to be higher educated, preferred a longer stay at destinations, preferred solo travel and preferred less reliance on package tours. Meanwhile, some characteristics of Mainland Chinese seniors were observed to deviate from expectations of Plog's typology. For example, they tended to prefer a length of stay of seven nights or more. On the one hand, this is surprising given that most Chinese seniors are often regarded as inexperienced international travelers who depend heavily on friends, families, or travel agencies for outbound travel information (Huang & Xu, 2018).

Theoretical contribution

First, the study provides helpful support to Plog's model in showing that the traditional allo, mid, and psycho centric spectrums conform to the U.S. senior tourists. At the same time, the study suggests that Mainland Chinese seniors deviate slightly from the aforementioned. Thus, the

later tended to be of the mid and psycho centric spectrum. Second, the study provides response to the question 'Do persons in specific market possess the same personality?' Evidently, persons within the same market space or region possess distinct personalities albeit possessing unique geographical proximity or sociocultural environment.

In addition, statistical methods are tools to test theoretical frameworks and accordingly, the application of multiple analytical tools to understand personality traits according to seniors' motivation and preferences produced interesting outcomes. On the one hand, all motivation dimensions were different across U.S. and Mainland Chinese seniors except for the motivation labelled "experiencing culture/culture". Contrarily, a regression analysis suggests that the two group of seniors are only different in their motivation for seeking self-esteem, escaping, and seeking time with family. This study reflects the extent of diversity with regard to the senior tourism market. As opined by Patterson (2018, p. 36), "older people are not all the same, and their travel and leisure choices will continue to become more divergent and less accurately represented by the existing stereotypes."

Practical contribution

As shown from this study, shared communities such as political orientation, language, history, cultural similarity does not essentially translate to same personality. Against the background of this study, it is a vital job of marketers to understand these personality distinctions. A valuable note in targeting the Mainland Chinese senior travel market thus lies in promoting familiarity rather than novelty. As such, a marketing message could include nostalgia - a sense of romanticism past lived experience (Otoo et al., 2020b; Sellick, 2004). Second, it is

also a given that as part of Chinese values, Mainland Chinese seniors, will prefer to stay with their families abroad during such travel (Mok & DeFranco, 2000).

Furthermore, international travel with a retired parent accounts for more than 10% of the Chinese outbound tourism (China Tourism Academy, 2018; Huang & Xu, 2018). This current study is therefore an important contribution to the tourism literature in identifying the need to promote family-oriented packages which particularly appeals to a midcentric cohort of Mainland Chinese seniors. Third, as personality traits alone do not determine travel interest, the elements of a travel package ought to include senior tourists' preferences. Fourth, evidence from the Mainland Chinese sample suggests a particular for health related tourism. Amidst the recent global COVID-19 pandemic, health safety has become both critical and topical for the travel industry with implications for future tourism. While this health safety concerns are particularly pronounced among the elderly (Hunter-Jones & Blackburn 2007; Hwang & Lee, 2019a; Patuelli & Nijkamp, 2016), it stands to reason that certain markets exhibit more resilient traits; the U.S. market is a case in reference (Otoo & Kim, 2018).

Another practical implication is the need for senior tourism destinations and tour companies to provide and promote safe destinations among female and married senior tourists, particularly among those of the U.S. cohort. Finally, nonsocial outdoor tourism is anticipated in a post-COVID-19 recovery. As eco-tourism was particularly notable among psychocentric and midcentrics who constitute bulk of travelers, governments and tourism marketers are expected to develop such activities as hiking and visit to nature reserves.

Conclusion and suggestions for future research

This paper clearly makes a worthwhile contribution to the tourism body of knowledge. In an age of significant business disruption where an understanding of consumer touch points has become central to successfully mapping the customer journey, it has become more critical than ever that tourism marketers fully comprehend the principal psychological drivers of engagement for each market segment they seek to service. The seniors' market, having emerged in the last decades as a significant but much misunderstood segment of the tourism and hospitality industry, is a case in point. The advent of the Internet, digital technology, real-time predictive analytics, and social media platforms has greatly revolutionized the dynamics of communication between senior travelers and their choices.

There are a few suggestions for future studies based on study limitations. Senior tourists are heterogeneous in their characteristics, hence understanding their distinct travel personality traits is an important area for understanding their complexity. However, this study did not attempt to make a comparison of differences between two national cohorts. Thus, the current study shows the possibility to demonstrate from a cross-cultural perspective the distinct motivations, preferences, intentions, sociodemographic and travel-related attributes in influencing tourism within personality segments. Therefore, further research is needed to understand the complexity of the senior travel market in other countries and further compare them. Psychographic distributions between two national groups were different. However, it can be understandable that two national groups show different results because seniors' psychographics are originally different. For example, U.S. seniors are more exposed to more international travels to long-haul destinations, compared to Chinese seniors. Therefore, U.S. seniors were distributed into three psychographic groups, while Chinese seniors fell on psychocentric or midcentric without allocentric.

Additionally, one critique of Plog's (1974) continuum is its limited application to understand the evolution of tourism in a multi-stage destination (McKercher, 2006). Therefore, a future study in an intra destination such as among various states within the U.S. or provinces within Mainland China could be useful for future research. Furthermore, as senior tourists are diverse, future research could apply alternative methodologies such as structural equation modelling to understand cultural and psychological variations among senior personality types. In addition, seniors' psychographic mechanism can vary according to their nationality because of different economic status, geographic influence, welfare social system. Therefore, a future study needs to identify whether the results are different across seniors' nations or cultural backgrounds. Finally, as this study was delimited to seniors who participated in outbound travel from the past three years, subsequent research could engage future active travelers.

References

Abbate, C. S., & Di Nuovo, S. (2013). Motivation and personality traits for choosing religious tourism. A research on the case of Medjugorje. *Current Issues in Tourism*, *16*(5), 501-506.

Suntikul, W., Agyeiwaah, E., Huang, W. J., & Pratt, S. (2020). Investigating the tourism experience of Thai cooking classes: An application of Larsen's three-stage model. *Tourism Analysis*, *25*(1), 107-122.

Alén, E., Losada, N., & de Carlos, P. (2017). Profiling the segments of senior tourists throughout motivation and travel characteristics. *Current Issues in Tourism*, *20*(14), 1454-1469.

Arriagada, P. (2018). A day in the life: How do older Canadians spend their time? Retrieved from https://www150.statcan.gc.ca/n1/en/pub/75-006-x/2018001/article/54947-eng.pdf?st=XV6MLHZj

Baah, N. G., Bondzi-Simpson, A., & Ayeh, J. K. (2019). How neophilia drives international tourists' acceptance of local cuisine. *Current Issues in Tourism*, 1-17.

Backman, K. F., Backman, S. J., & Silverberg, K. E. (1999). An investigation into the psychographics of senior nature-based travellers. *Tourism Recreation Research*, *24*(1), 13-22.

Baloglu, S., & Shoemaker, S. (2001). Prediction of senior travelers' motorcoach use from demographic, psychological, and psychographic characteristics. *Journal of Travel Research*, *40*(1), 12-18.

Brown, S. & Lehto, X. (2005). Traveling with a purpose: Understanding the motive and benefits of volunteer vacations. *Current Issues in Tourism, 8*(6), 479-496.

Caber, M., & Albayrak, T. (2014). Does the importance of hotel attributes differ for senior tourists? A comparison of three markets. *International Journal of Contemporary Hospitality Management*, *26*(4), 610-628.
Chen, S. C., & Shoemaker, S. (2014). Age and cohort effects: The American senior tourism market. *Annals of Tourism Research*, *48*, 58-75.
China Tourism Academy (2018). China Tourism Academy and Ctrip Released the Big Data Report for 2017 Chinese Outbound Tourism Market. Retrieved from www.ctaweb.org/html/2018-2/2018-2-26-11-57-78366.html.
Cohen, E. (1972). Towards a sociology of international tourism. *Sociological Research, 39*, 164-182.
Choe, J. Y. J., & Kim, S. S. (2019). Development and validation of a multidimensional tourist's local food consumption value (TLFCV) scale. *International Journal of Hospitality Management*, *77*, 245-259.
Cruz-Milan, O. (2018), Plog's model of personality-based psychographic traits in tourism: A review of empirical research. In Camilleri, M.A. (Ed.) *Tourism Planning and Destination Marketing* (pp. 49-74). Bingley, UK: Emerald Publishing Limited,
Dedeoğlu, B. B., Okumus, F., Yi, X., & Jin, W. (2019). Do tourists' personality traits moderate the relationship between social media content sharing and destination involvement? *Journal of Travel & Tourism Marketing*, *36*(5), 612-626.
Di Fabio, A., & Kenny, M. E. (2018). Connectedness to nature, personality traits and empathy from a sustainability perspective. *Current Psychology*, 1-12. Retrieved from https://doi.org/10.1007/s12144-018-0031-4
Ekinci, Y., & Hosany, S. (2006). Destination personality: An application of brand personality to tourism destinations. *Journal of Travel Research*, *45*(2), 127-139.
Eurostat (2019). Tourism trends and ageing. Retrieved from https://ec.europa.eu/eurostat/statistics-explained/index.php/Tourism_trends_and_ageing
Fleischer, A., & Pizam, A. (2002). Tourism constraints among Israeli seniors. *Annals of Tourism Research*, *29*(1), 106-123.
Fry, R. (2018). *Millennials projected to overtake Baby Boomers as America's largest generation*. Washington, DC: Pew Research Center.
Gelfeld, V. (2018). *2019 Boomer travel trends*. Washington, DC: AARP Research. https://doi.org/10.26419/res.00263.001
Garau-Vadell, J. B., & de Borja-Solé, L. (2008). Golf in mass tourism destinations facing seasonality: a longitudinal study. *Tourism Review*, *63*(2), 16-24.
Griffith, D. A., & Albanese, P. J. (1996). An examination of Plog's psychographic travel model within a student population. *Journal of Travel Research*, *34*(4), 47-51.
Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R.E. (2010). *Multivariate data analysis: A global perspective*. Upper Saddle River, NJ: Prentice Hall.
Hirsh, J. B. (2010). Personality and environmental concern. *Journal of Environmental Psychology*, *30*(2), 245-248.
Ho, G. & McKercher, B. (2015). A review of Life Cycle Models by Plog & Butler from a marketing perspective. In M. Kozak & N. Kozak (Eds.) Destination Marketing: An International Per-spective (pp.145-154). London; NewYork: Routledge.
Hong, G. S., Kim, S. Y., & Lee, J. (1999). Travel expenditure patterns of elderly households in the US. *Tourism Recreation Research*, *24*(1), 43-52.

Hsu, C. H., & Kang, S. K. (2009). Chinese urban mature travelers' motivation and constraints by decision autonomy. *Journal of Travel & Tourism Marketing*, *26*(7), 703-721.
Hsu, C. H., Cai, L. A., & Wong, K. K. (2007). A model of senior tourism motivations-Anecdotes from Beijing and Shanghai. *Tourism Management*, *28*(5), 1262-1273.
Huang, R., & Xu, T. (2018). Opportunities and challenges brought by the China outbound travel market. *Worldwide Hospitality and Tourism Themes*, *10*(6), 642-651.
Huang, S., & Hsu, C. H. (2009). Travel motivation: linking theory to practice. *International Journal of Culture, Tourism and Hospitality Research*, *3*(4), 287-295.
Hunter-Jones, P., & Blackburn, A. (2007). Understanding the relationship between holiday taking and self-assessed health: An exploratory study of senior tourism. *International Journal of Consumer Studies, 31*, 509–516.
Hwang, J., & Lee, J. (2019a). A strategy for enhancing senior tourists' well-being perception: Focusing on the experience economy. *Journal of Travel & Tourism Marketing*, *36*(3), 314-329.
Hwang, J., & Lee, J. (2019b). Antecedents and consequences of brand prestige of package tour in the senior tourism industry. *Asia Pacific Journal of Tourism Research*, *24*(7), 679-695.
Kattiyapornpong, U., & Miller, K. E. (2011). Social structure and psychographic explanations of destination preference of Australians' travel to south-east Asia. *Asia Pacific Journal of Tourism Research*, *16*(1), 39-56.
Keng, K. A., & Cheng, J. L. L. (1999). Determining tourist role typologies: An exploratory study of Singapore vacationers. *Journal of Travel Research*, *37*(4), 382-390.
Kim, M. J., Kim, W. G., Kim, J. M., & Kim, C. (2016). Does knowledge matter to seniors' usage of mobile devices? Focusing on motivation and attachment. *International Journal of Contemporary Hospitality Management*, *28*(8), 1702-1727.
Kim, M. J., Lee, C. K., & Bonn, M. (2016). The effect of social capital and altruism on seniors' revisit intention to social network sites for tourism-related purposes. *Tourism Management*, *53*, 96-107.
Kim, H., Yilmaz, S., & Choe, Y. (2019). Traveling to your match? Assessing the predictive potential of Plog's travel personality in destination marketing. *Journal of Travel & Tourism Marketing*, *36*(9), 1025-1036.
Lee, Y., & Weaver, D. (2014). The tourism area life cycle in Kim Yujeong literary village, Korea. *Asia Pacific Journal of Tourism Research, 19(*2), 181-198.
Lepp, A., & Gibson, H. (2008). Sensation seeking and tourism: Tourist role, perception of risk and destination choice. *Tourism Management*, *29*(4), 740-750.
Lieux, E. M., Weaver, P. A., & McCleary, K. W. (1994). Lodging preferences of the senior tourism market. *Annals of Tourism Research*, *21*(4), 712-728.
Littrell, M.A., Paige R.C., and Song K. (2004). Senior travellers: tourism activities and shopping behaviours. *Journal of Vacation Marketing, 10*(4), pp. 348–362
Litvin, S. W. (2006). Revisiting Plog's model of allocentricity and psychocentricity... one more time. *Cornell Hotel and Restaurant Administration Quarterly*, *47*(3), 245-253.
Lu, J., Hung, K., Wang, L., Schuett, M. A., & Hu, L. (2016). Do perceptions of time affect outbound-travel motivations and intention? An investigation among Chinese seniors. *Tourism Management*, *53*, 1-12.
Mak, A. H., Lumbers, M., Eves, A., & Chang, R. C. (2017). The effects of food-related personality traits on tourist food consumption motivations. *Asia Pacific Journal of Tourism Research*, *22*(1), 1-20.

McKercher, B. (2006). Are psychographics predictors of destination life cycles? *Journal of Travel & Tourism Marketing*, *19*(1), 49-55.
Merritt, R., Kline, C., Crawford, A., Viren, P., & Dilworth, G. (2018). Vacation activity preferences: An examination of generational differences across psychographic categories employing Plog's model. *Journal of Park and Recreation Administration*, *36*(4), 55-71.
Miao, R., & Wu, C. (2004). 中国的人口老龄化程度到底有多严重[How serious is China's Population Aging]. 西北人口[Northwest Population] 5, 41–43.
Mo, C. M., Howard, D. R., & Havitz, M. E. (1993). Testing an international tourist role typology. *Annals of tourism research*, *20*(2), 319-335.
Moisey, R. N., & Bichis, M. (1999). Psychographics of senior nature tourists: The Katy Nature Trail. *Tourism Recreation Research*, *24*(1), 69-76.
Mok, C., & DeFranco, A. L. (2000). Chinese cultural values: Their implications for travel and tourism marketing. *Journal of Travel & Tourism Marketing*, *8*(2), 99-114.
Murphy, L., Benckendorff, P., & Moscardo, G. (2007). Destination brand personality: Visitor perceptions of a regional tourism destination. *Tourism Analysis*, *12*(5-6), 419-432.
Musa, G., & Sim, O. F. (2010). Travel behaviour: a study of older Malaysians. *Current Issues in Tourism*, *13*(2), 177-192.
Nella, A., & Christou, E. (2016). Extending tourism marketing: Implications for targeting the senior tourists' segment. *Journal of Tourism, Heritage & Services Marketing, 2*(1), 36-42.
Norman, W. C., Daniels, M. J., McGuire, F., & Norman, C. A. (2001). Whither the mature market: An empirical examination of the travel motivations of neo-mature and veteran-mature markets. *Journal of Hospitality & Leisure Marketing*, *8*(3-4), 113-130.
Oliveira, C., Brochado, A., & Correia, A. (2018). Seniors in international residential tourism: looking for quality of life. *Anatolia*, *29*(1), 11-23.
Onyx, J. & Leonard, R. (2005). Australian grey nomads and American snowbirds: Similarities and differences. *Journal of Tourism Studies, 16*(1), 61-68.
Otoo, F. E., & Kim, S. (2018). Is there stability underneath health risk resilience in Hong Kong inbound tourism? *Asia Pacific Journal of Tourism Research*, *23*(4), 344-358. https://doi.org/10.1080/10941665.2018.1433700
Otoo, F. E., & Kim, S. (2020). Analysis of studies on the travel motivations of senior tourists from 1980 to 2017: progress and future directions. *Current Issues in Tourism*, *23*(4), 393-417.
Otoo, F. E., Kim, S., & Choi, Y. (2020a). Developing a multidimensional measurement scale for diaspora tourists' motivation. *Journal of Travel Research*. Retrieved from https://doi.org/10.1177/0047287519899990.
Otoo, F. E., Kim, S., & Choi, Y. (2020b). Understanding senior tourists' preferences and characteristics based on their overseas travel motivation clusters. *Journal of Travel & Tourism Marketing*, *37*(2), 246-257.
Patterson, I (2018). Tourism and leisure behaviour in an ageing world. Wallingford, Oxfordshire: CABI.
Patuelli, R., & Nijkamp, P. (2016). Travel motivations of seniors: a review and a meta-analytical assessment. *Tourism Economics*, *22*(4), 847-862.
Pearce, P. L. (1993). Fundamentals of tourist motivation. In D. Pearce & R. Butler (eds.), *Tourism research: Critiques and challenges* (pp. 113-134). London: Rutledge.
Pesonen, J., Komppula, R., & Riihinen, A. (2015). Typology of senior travellers as users of tourism information technology. *Information Technology & Tourism*, *15*(3), 233-252.

Plog, S. C. (1974). Why destination areas rise and fall in popularity. *Cornell hotel and restaurant administration quarterly*, *14*(4), 55-58.
Plog, S. C. (1987). Understanding psychographics in tourism research. In Ritchie, J.R.B. and Goeldner, C.R. (eds) Travel, tourism and hospitality research. A Handbook for managers and researchers (pp. 203-213). New York: John Wiley and Sons.
Plog, S. C. (2002). The power of psychographics and the concept of venturesomeness. *Journal of Travel Research*, *40*(3), 244-251.
Roberts, B. W., & DelVecchio, W. F. (2000). The rank-order consistency of personality traits from childhood to old age: a quantitative review of longitudinal studies. *Psychological Bulletin*, *126*(1), 3-25.
Ryan, C. (2010). Ways of conceptualizing the tourist experience a review of literature. *Tourism Recreation Research*, *35*(1), 37-46.
Ryu, E., Hyun, S. S., & Shim, C. (2015). Creating new relationships through tourism: A qualitative analysis of tourist motivations of older individuals in Japan. *Journal of Travel & Tourism Marketing, 32*(4), 325-338.
Sellick, M. C. (2004). Discovery, connection, nostalgia: Key travel motives within the senior market. *Journal of Travel & Tourism Marketing*, *17*(1), 55-71.
Shoemaker, S. (2000). Segmenting the mature market: 10 years later. *Journal of Travel Research*, *39*(1), 11-26.
Śniadek, J. (2006). Age of seniors–a challenge for tourism and leisure industry. *Studies in Physical Culture & Tourism*, *13*, 103-106.
Smith, S. L. J. (1990). A test of Plog's Allocentric/Psychocentric Model: Evidence from seven nations. *Journal of Travel Research 28*(4), 40-43.
Tiago, M. T. P. M. B., de Almeida Couto, J. P., Tiago, F. G. B., & Faria, S. M. C. D. (2016). Baby boomers turning grey: European profiles. *Tourism Management, 54*, 13–22.
United Nations (2017). *World population prospects: The 2015 revision*. World population prospects. Department of Economic and Social Affairs, Population Division. New York: USA. Retrieved from https://esa.un.org/unpd/wpp/DataQuery/
United Nations World Tourism Organization (2019). *Guidelines for Success in the Chinese Outbound Tourism Market*. Retrieved from https://www.e unwto.org/doi/pdf/10.18111/ 9789284421138
Vigolo, V., & Confente, I. (2013). Older tourists: An exploratory study on online behaviour. In X. Z., Zheng & Tussyadiah, I. (eds), *Information and Communication Technologies in Tourism 2014* (pp. 439-452). Cham, Switzerland: Springer International Publishing.
Wang, W., Wu, W., Luo, J., & Lu, J. (2017). Information technology usage, motivation, and intention: A case of Chinese urban senior outbound travelers in the Yangtze River Delta region. *Asia Pacific Journal of Tourism Research, 22*(1), 99-115.
Ward, A. (2014). Segmenting the senior tourism market in Ireland based on travel motivations. *Journal of Vacation Marketing*, *20*(3), 267-277.
Woo, E., Kim, H., & Uysal, M. (2016). A measure of quality of life in elderly tourists. *Applied Research in Quality of life*, *11*(1), 65-82.
Wu, L., Zhang, J., & Fujiwara, A. (2011). Representing tourists' heterogeneous choices of destination and travel party with an integrated latent class and nested logit model. *Tourism Management*, *32*(6), 1407-1413.