ABSTRACT

Attracting the solo travel market is increasingly important for destination marketing organizations. Despite the wealth of literature on travel motivations of solo travelers, a related domain of research that deserves more attention are the travel constraints that could hinder solo traveling. More specifically, although solo travelers may wish to embark on a journey alone, they must nevertheless, address a number of constraints that oftentimes stem from their *family's* concerns for them as family represents a critical influencer that could impact their travel decision. Yet, research measuring the influence of family remains under-studied. To address this gap, this study connects knowledge on travel constraints with literature on family dynamics to develop a valid and reliable measurement scale for assessing family pressures on solo travelers. Destination marketers can apply this scale to evaluate the effectiveness of their marketing strategies at easing the concerns of solo travelers as a result of family pressures.

INTRODUCTION

Attracting the solo travel market, representing tourists who arrive at a destination alone and without the company of family, partners, or friends, is becoming increasingly important for destination marketing organizations (DMOs) and tourism operators worldwide (Rosenbloom, 2012). Recent studies reported that 24% travelers have travelled alone at least once on their most recent leisure trip, and a growing number of solo travelers are professionals from Asia, especially China and India (Millward Brown, 2015). Young, educated females have a higher likelihood of traveling alone than other market segments (Laesser, Beritelli & Beiger, 2009), and in Europe, the Norwegian cruise, Epic, now provides single-occupancy rooms to attract the solo travelers market (Newman, 2010).

Accordingly, a wealth of previous studies in the tourism literature has focused on the topic of tourists' profiles and motivations for solo travel. For example, Mehmetoglu, Dann and Larsen (2001) examined why tourists traveled on their own in the Norwegian Lofoten Islands, and identified a number of socio-psychological justifications, including experience, freedom, exploration, and solitude. Laesser, Beritelli and Bieger (2009) profiled solo travelers from Switzerland and found that solo travelers were motivated to foster their curiosity and at the same time, look for new social contacts. More recently, Bianchi (2016) examined the main motivators and drivers of satisfaction and dissatisfaction for solo holiday travelers in Queensland, Australia.

Despite the wealth of literature on motivations for why individuals engage in solo travel, a related domain of research that deserves more attention are the travel constraints that could hinder solo traveling. More specifically, although solo travelers may wish to embark on a journey alone, they must nevertheless, address a number of constraints that oftentimes stem from their *family's* concerns for them. Yet, it is surprising that no study to-date has empirical

assessed the influence of family on the travel constraints facing solo tourists. This consideration is necessary and relevant as family represents a critical influencer that could ultimately impact tourists' decisions to travel alone or not. For example, family members may express pertinent concerns particularly for female solo travelers on a number of issues related to safety and security (Chiang & Jogaratnam, 2005). Family members (e.g., parents) may also question solo travelers' (e.g., their children's) ability to negotiate a number of constraints, including time, money and other resources, when they are alone (Chung, Baik, & Lee, 2016). Furthermore, family members could put pressure on a tourist's decision to solo travel given family and social commitments that he/she may have at home (Nyaupane & Andereck, 2007). From a managerial perspective, by understanding the pressures from the influencer (i.e., family), DMOs and tourism marketers can take steps (e.g., provide tourists with relevant information to share with their family) to help tourists better alleviate their family's concerns for solo travel.

In light of the above research gap, this study seeks to address two objectives. The first objective is to identify the types of family pressures that could influence the travel constraints facing solo tourists (i.e., intrapersonal, interpersonal, and structural constraints). The second objective is to develop a valid and reliable measurement scale to assess these intrapersonal, interpersonal, and structural constraints. Taken together, this study contributes to both the increasing body of tourism research on solo travelers, as well as adds to existing knowledge on travel constraints by connecting it to the literature on family dynamics.

LITERATURE REVIEW

Solo travel

It is crucial to differentiate between the terms, "independent" and "solo" travelers. Independent travelers, or fully independent travelers (FIT), describes individuals "who neither travel on a fully inclusive package nor in a group" (Wilson, 2004, p.8). FITs enjoy higher degree of flexibility and freedom than package tourists when choosing destinations and distribution channels (Hyde & Lawson, 2003). This group of tourists prefers to make personalized itineraries and pre-book a minimum of accommodation, transportation and entertainment because they have considerable amount of choices when they arrive in the destination (Wilson, 2004).

On the contrary, "solo travel" refers to an individual's arrival status, instead of travelling status, at a destination (Foo, 1999). In other words, although solo travelers arrive at a destination alone, they do not necessarily remain alone for the entire tourism experience because it is difficult to avoid contact with service providers, residents, and other tourists during accommodation, catering, transportation, or entertainment. It is also possible for solo travelers to engage with other tourists at the destination, or arrange part of their trip with the assistance of tour guides (Wilson, 2004).

Within the solo travel market, tourists can be divided into two groups: single solo and single group (Laesser, Beritelli, & Beiger, 2009). Single solo represents individuals who stay alone and travel alone, while single group refers to tourists who stay alone, yet travel with a group of others. Further to classifying solo tourists by travel status, previous research has also classified tourists by preference: default or choice (Mehmetoglu, Dann & Larsen, 2001). Solo travelers by default do not deliberately travel by themselves; that is, they would not choose to travel alone if chances were provided to travel with partners. In contrast, solo travelers by choice represents tourists who opt to travel on their own, without companions or significant

others (Mehmetoglu, Dann & Larsen, 2001). Based on the above definitions, this study focuses on *single solo* travelers who travel *by choice*.

Constraints

Constraints are defined as factors that "inhibit people's ability to participate in leisure activities, to spend more time doing so, to take advantage of leisure services, or to achieve a desired level of satisfaction" (Jackson, 1988, p. 203). One of the earliest conceptual classifications distinguishes between "internal" and "external" constraints (Francken & Van Raaij, 1981). Internal constraints represent attributes within the individual, such as personalities, attitudes, knowledge and interests. External constraints represent environmental characteristics surrounding the individual, including lack of time, money and facilities. A criticism with this dyadic conceptualization is that the distinctions between the two domains can influence one another; for example, although "lack of ability" could be perceived as an internal constraint, certain skills may be required to operate facilities, and thus, "lack of ability" could overlap with "lack of facilities" (Jackson, 1988).

Another conceptualization that has been widely adopted and developed over-time is more process-oriented in nature (Crawford & Godbey, 1987). While the internal/external model is regarded as relatively static, the assumption behind the process model is that constraints could be dynamic, intervening factors that affect an individual's participation and preference. In this model, constraints are classified into three categories: intrapersonal, interpersonal and structural. Intrapersonal constraints involve individual psychological states and attributes; interpersonal constraints reflect interpersonal interactions with the individual; structural constraints include physical and demographical factors that may intervene in preference and participation (Crawford & Godbey, 1987). A hierarchical order exists among the three constraints and these three dimensions need to be confronted sequentially (Jackson,

1993); that is, intrapersonal constraints need to be overcome before addressing interpersonal and structural constraints (Crawford, Jackson & Godbey, 1991). Table 1 presents a pool of items across the three constraints that have been identified in the tourism and leisure literature.

This constraints model has been applied to a broad range of experiences, including leisure and tourism experiences (Godbey, Crawford & Shen, 2010). For example, Gilbert and Hudson (2000) examined the constraints for non-participants and participants of skiing activities. Non-participants face greater intrapersonal constraints while participants often encounter structural constraints. Nyaupane and Anderek (2007) assessed multiple items within structural constraints and compared the constraints between instate and out-of-state tourists to Arizona. The present study adds to contribute this literature by developing a scale to measure family's influence on intrapersonal, interpersonal, and structural constraints for solo travelers.

--- Insert Table 1 here ---

Family dynamics

Family dynamics can have a high degree of influence on shaping children's social expectations, behavior, attitudes, and activities (Schaefer, 2000). Family is one of the most vital agents of socialization, and parents can help children acquire the characteristics, norms, and values that are appropriate and desirable not only in their family, but also in the broader community and society (Xu et al., 1991). Nevertheless, the influence of 'family' on an individual is highly culture-dependent, and family pressures can represent different connotations depending on whether it is considered from a Western or Eastern perspective. In other words, individuals' upbringing from different cultures can influence how they react to

the influence of family; for example, in Chinese culture, concepts such as face, shame, and honour are used as a constraining, moral practice to socialize children (Li, Wang, & Fischer, 2004). The Confucian concept of "knowing shame" is frequently conveyed by families as an important moral virtue that is emphasized since childhood (Fung & Chen, 2001). Comparatively, individuals of Western backgrounds (e.g., Australia) may view the influence of family on shaming as authoritative and negative (Wu et al., 2002).

Similarly, the influence of family on travel constraints is certainly culture-dependent, and this study makes no attempt to suggest that the connection between 'family' and 'travel constraints' is universal. It is improbable to develop a scale to measure pressures on travel constraints that are applicable to 'families' universally; consequently, it is more relevant to select a cultural context in which to frame the scale. In this regard, this study sought to examine the influence of family from a Confucius perspective based on filial piety, which dominates much of the dynamics in not only Chinese families, but also Singaporean, Korean, and Japanese families (Sung, 2001). From a managerial perspective, selecting this context is also relevant for tourism marketers as the solo travel market in China is experiencing rapid growth. Twenty percent of Chinese travelers travelled by themselves in 2015 ("solo travel", 2016), and a number of young Chinese with higher levels of education are finding more time and money, which are usually supported by their parents, to travel alone (Meng, 2010).

Confucianism and the traditional influence of family on children's behavior

Confucianism is the primary indigenous philosophy in traditional Chinese culture, acting as a behavioral and moral guideline (Fan, 2000). There are five basic human relations principles in Confucianism, called *Wu Lun,* including the relations between sovereign and minister, father and son, husband and wife, elder and younger siblings, as well as friend and friend. Within these five categories, patriarchal dynamics between father and son is the core

of family relations (Liu & Zhao, 2010). The father's attitude, and by extension, the family's primary influencer, is important in shaping children's behavior, and children are expected to reciprocate through obedience and filial piety, representing the virtue of respect for parents, elders, and ancestors (Fan, 2000).

Under Confucianism, Chinese parents tend to define good children as those who show concerns about family, spend time with family, and take care of family members. Likewise, some Chinese children agree that "taking care of family" and "spending time with them" are criteria of a good child (Lam, 2007). Children typically see their parents as authoritative in family relations, and parents are viewed as controlling, oftentimes requiring children to act according to their expectations and decisions (Xia, Xie, Zhou, Defrain & Combs, 2004). Since harmony is a crucial element in Confucianism, respecting authority is seen as necessary for family and social harmony by guiding people to avoid conflicts, and by placing the interests of group over their self-interests (Fan, 1995). Indeed, group-mindedness and mutual dependency have long been found in typical Chinese families (Yang, 1981).

Contemporary family dynamics

The media has become a vital agent of socialization since China endorsed the Open Door Policy in 1978 (Schaefer, 2000). Today, while collectivistic tendencies to behave for the benefits of the group and values for the 'we' are still pertinent in family and social dynamics (Hoftstede, 2001), individualistic notions, oftentimes introduced through social media, are starting to influence younger generations (Cao, 2009). These differences in perspectives are reflected in increasingly different values and judgments among parents and children (Nelson, Duan, Padilla-Walker & Luster, 2013).

Nevertheless, Chinese parents are becoming less controlling and authoritative, and

parents are willing to extend a certain degree of autonomy for children when they make decisions (Xia et al., 2004). For example, Chinese adolescents are likely to make independent or joint decisions related to choosing college majors, making friends, and going for entertainments (Xia et al., 2004). Yet, parents still retain considerable influence and power over issues related to safety and security, such as curfews and entertainment (e.g., parties), and children will still comply with their family's opinions when they travel (Hsu, Kang, & Lam, 2006).

METHODOLOGY

A multi-stage process based on Churchill's (1979) recommended scale development procedures was used to develop a measurement instrument to assess the influence of family on travel constraints for solo travelers. In addition, guidelines for establishing measurement reliabilities as well as previous scale development studies were referenced (e.g., Gilbert & Hudson, 2000; Kim, Ritchie, & McCormick, 2012;). The following sections describe the procedures across the overall stages in the scale development process.

Specification of Construct Domains and Generation of Initial Items Pool

A set of 22 items related to the three constraint domains (i.e., intrapersonal, interpersonal, and structural) was initially generated from a review of the tourism and leisure literature as reported earlier in Table 1. Next, a supplementary exploratory study was conducted as a preliminary step towards uncovering additional scale items to ensure better coverage of the construct domain in the measurement scale (Kim, Ritchie, & McCormick, 2012).

Semi-structured interviews with open-ended questions were conducted with 10

Chinese solo travelers. The interviews were conducted face-to-face in Chinese in an effort to facilitate better communication with interviewees. Interviewees were asked to describe their recent solo travel experience, and to explain the way their family influenced each of the three dimensions of travel constraints in their travel decision-making process. They were also asked to discuss the ways in which they addressed their family's influence. Interview scripts were forward translated into English, and then backwards translated and compared back to the original transcripts to ensure that they reflected interviewees' original opinions. Overall the main purposes of this preliminary study were to identify themes or construct dimensions that further described the influence of family on travel constraints and to ensure the content validity of existing construct domains, which were predetermined from the literature review. For example, an interviewee noted that her family thought solo traveling was unsuitable for her gender. After combining the interview results with items extracted from the literature, a total of 26 items were generated, with eight items representing intrapersonal constraints, nine items reflecting interpersonal constraints, and nine items representing structural constraints (see Table 3).

Data collection for quantitative analysis

Questionnaires were distributed to Chinese respondents to measure the influence of family on travel constraints based on a 7-point Likert-type scale that ranged from 1 (strongly disagree) to 7 (strongly agree). Demographic information such as age and gender were also captured in the questionnaire.

Respondents were recruited via convenience sampling and snowball sampling on WeChat and Sojump.com. WeChat has over 700 million users and is one of the most popular messaging apps in China (Economist, 2016) and Sojump.com is a Chinese survey platform that enables researchers to create online questionnaires. The researchers first invited

respondents through their networks, and then asked respondents to forward the questionnaire to their contacts. Additionally, respondent received approximately RMB 2 on average as an incentive for completing the survey via 'red pockets' on WeChat.

A total of 415 usable questionnaires were received out of a total of 482, representing an overall response rate of 86.1 %. As reported in Table 2, there were a larger percentage of female respondents (66.7%) compared to male respondents (33.3%) at an average age of 21.3 years old. Respondents' travel histories show that they are largely experienced travelers, with the majority of them (65.8%) having taken 1 to 3 trips in the past 12 months while over a third of them having travelled over 4 to 8 times (29.2%) during the same one-year period. Finally, approximately half of the respondents (50.8%) have engaged in prior solo traveling.

--- Insert Table 2 here ---

FINDINGS

Purification of the scale

An iterative scale purification procedure as recommended by Churchill (1979) was used to develop the scale. Item-to-total correlations were computed for all items, and items that were poorly correlated ($r < .3$) with the total score were eliminated as per common practice (Bearden, Netemeyer & Teel, 1989; Choi & Sirakaya, 2005; Chu & Murrmann, 2006; Kehoe, 1995; Larsen, Brun, & Ogaard 2009). This procedure resulted in nine items being eliminated, out of the original 26. Internal consistency was measured using Cronbach's alpha (Cronbach, 1951; Lankford & Howard, 1994). The reliability of the 17 remaining items was 0.895, and a reliability measure greater than 0.8 is considered as a representation of good internal consistency (Peter & Churchill, 1986). This suggests that the scale was highly reliable.

Next, exploratory factor analysis (EFA) using both Oblique (OBLIMIN) and orthogonal (VARIMAX) rotation methods were performed to assess dimensionality (Netemeyer, Bearden & Sharma, 2003). The Bartlett's Test of Sphericity was 2786.173 ($p < 0.001$), indicating that the factor analysis was appropriate. In addition, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.911. KMO values over .9 are described as meritorious (Kaiser, 1974). The results from both methods showed similar structures, and factors with eigenvalues greater than 1 were extracted. To decide whether or not to retain an item, both its factor loading and the communality were examined. Items with a low factor loading ($r < 0.4$) and communality ($r < 0.4$) were removed (Floyd & Widaman, 1995). As a result, a final three-factor model emerged, with the remaining 10 items accounting for 69.2% of the total variance. Factor 1 involved items measuring intrapersonal constraints; factor 2 contained items representing interpersonal constraints; and factor 3 involved items explaining structural constraints. Cronbach's alpha for the scale was 0.861, again above the benchmark of 0.8, suggesting that the scale was highly reliable.

Assessment of latent structure

Confirmatory factor analysis (CFA) provides "a more rigorous test of item loadings" (Hinkin, Tracey & Enz, 1997, p. 14). It aims to verify whether the data fits the factors identified in EFA (Kim, Ritchie & McCormick, 2012). Before performing the CFA, the total sample was split into two subgroups using SPSS random case selection. The first group was the calibration sample while the second group was the validation sample.

To evaluate the overall fit of the model, a number of goodness-of-fit statistics were used, including chi-square to the degrees of freedom ratio (i.e., $\chi 2 / df$), comparative fit index (CFI; Bentler, 1992), nonnormed fit index (NNFI; Bentler & Bonett, 1980) and root mean square error of approximation (RMSEA). Results of the CFA showed that the measurement

model fitted the data very well. The ratio of the $\chi 2$ to the degrees of freedom was less than two ($\chi 2$ /*df* = 1.53), and other goodness-of-fit indices (CFI = 0.980, NNFI = 0.945, and RMSEA = 0.051) were in line with established criteria (CFI > 0.90, NNFI > 0.95, and RMSEA < 0.08; Bentler, 1992; Hu & Bentler, 1999; Jöreskog & Sörbom, 1996). Furthermore, composite reliability estimates were calculated to assess the reliability of the scale. As shown in Table 3, the composite reliability estimates ranged from .75 to .86. Composite reliability estimates greater than 0.7 suggests good internal consistency of multiple indicators for each construct in the model (Hair et al., 1998).

--- Insert Table 3 here ---

Convergent validity and discriminant validity were evaluated in the next step. Convergent validity was assessed via factor loadings (r > .4) and the average variance extracted (AVE > .5) (Fornell & Larcker, 1981). As shown in Table 4, the AVE of the three factors all exceeded the unexplained variance (> 0.5), and the factor loadings for individual items were greater than .4. In terms of discriminant validity, Fornell and Larcker (1981) suggested that the AVE should exceed the corresponding correlation estimate between two factors (i.e., the square of their intercorrelations). In this study, the AVE exceeded shared variance between any two constructs (see Table 4). Overall, this measurement model showed strong evidence of reliability and validity.

--- Insert Table 4 here ---

Scale validation

Similar procedures were conducted on the validation sample. There was good model

fit ($\chi 2$ /*df* = 1.22, CFI = 0.991, NNFI = 0.955, and RMSEA= 0.033). Table 5 and Table 6 show the standardized factor loadings, composite reliabilities and AVE, as well as the intercorrelations, respectively. Again, the results support for both convergent validity and discriminant validity.

--- Insert Table 5 here ---

--- Insert Table 6 here ---

Invariance test

Two invariance tests were conducted to examine the validity of the scale across the calibration and validation samples. The first test can be regarded as a prerequisite for the latter test since the same construct should be measured across groups. Failure to achieve configural invariance in the first step would suggest the existence of different constructs, which would negate the purpose of the second test (i.e., to examine whether the factor loadings are identical across groups). Here, the same number of factors and patterns of the free and fixed loadings need to be consistent across the calibration and validation samples. The results supported the configural invariance of the measurement model across the calibration and validation samples ($\chi 2$ = 88.2, df = 64, RMSEA = 0.030). A CFI value of 0.986 and RMSEA value of less than 0.05 suggest good model fit (Cheung & Rensvold, 2002).

Next, to assess whether the factor loadings were identical across samples, one unit change of an item score should reflect an equal unit change of the factor score across groups (Wu, Li & Zumbo, 2007). The results supported the invariance model ($\chi 2$ = 109.8, df = 74, RMSEA = 0.034, CFI = .979). Overall, the model fit indices of both the calibration and

validation samples, as well as the results of the two invariance tests suggest that the scale developed in this study is viable and has construct validity.

DISCUSSION

The objectives of this study were to first identify the influence of family on travel constraints facing solo tourists, and then to develop a valid and reliable measurement scale to assess these constraints. A total of 10 items across three dimensions of constraints (i.e. intrapersonal, interpersonal, and structural) were found. Evidence of reliability and dimensionality were provided by the results of Cronbach's alpha and EFA. CFA was utilized to assess construct validity, including convergent and discriminant validity. The total sample was split into the calibration sample and validation sample for cross-validation, and a consistent factor structure was supported. A number of goodness-of-fit indices indicated the model's good fit to both datasets. In doing so, this study contributed to the growing body of tourism literature on solo travelers, and connected aspects of family dynamics to existing knowledge on travel constraints.

Theoretical implications

The findings of this study are valuable for academic research. This study represents the first empirical examination of the influence of family on the travel constraints of the growing solo travelers segment, and establishes relevant indicators to measure each of the three dimensions of constraints. More specifically, this study contributed to the tourism literature by connecting the leisure constraints model that conceptualized three types of constraints: intrapersonal, interpersonal and structural (Crawford & Godbey, 1987; Crawford, Jackson & Godbey 1991), to understand the constraints of solo travelers from a

Confucianism perspective of family relations.

Under Confucianism, the family is the primary influencer in shaping children's behaviors, and children are expected to reciprocate through obedience and filial piety (Fan, 2000). Good children are those who show concerns about family, spend time with family, and take care of family members (Lam, 2007). These family dynamics are evidently reflected in a number of indicators that constrained solo travelers (e.g., "My family does not want me to spend time on solo traveling"; and "My family holds a negative attitude towards solo traveling").

Additionally, the family was found to exert considerable influence and power over whether individuals could engage in solo travel in the first place. The findings of this study suggest that parents could withhold financial support (e.g. "My family does not want to provide financial support (i.e. money) for me for solo traveling"). Parents may even try to find a travel companion for their children so that their children are no longer 'solo' traveling. These travel companions would have time and appropriate skills to enable their children and their partners to support each other during the trip. Indeed, this reflects the group-mindedness and mutual dependency have long been found in typical Chinese family influences (Yang, 1981).

Another interesting finding of this study is the family's gendered perception of solo traveling; in other words, this relates to whether the family thinks solo traveling is (un)suitable for their children's gender. Based on discussions in the family literature, females are perceived by parents soft while males are hard (Ashmore & Del Boca, 1986). In other words, females are regarded as being vulnerable to potential danger. Hence, the indicator on "solo traveling is unsuitable for my gender" connects to another indicator found in this study, which is "my family thinks traveling alone is dangerous." While this study did not assess differences in ratings between male and female respondents across these two

indicators, the influence of family through these indicators do corroborate well with past tourism research that suggested females tend worry more about safety and security issues when they consider whether or not to engage in solo travel (Chiang & Jogaratnam, 2005).

Marketing implications

There are relevant managerial implications from the results of this study. DMOs and tourism practitioners who are targeting the solo travelers market can focus on the indicators and dimensions identified in this study in their promotional programs, thereby assisting and enabling potential solo tourists to better persuade their family in the travel decision making process. In other words, tourism marketers can assess the influence of family on their potential customer's travel constraints, then refine their marketing strategies to help them negotiate their family pressures. For example, this study identified one of the intrapersonal constraints as: "My family holds a negative attitude towards solo traveling." Consequently, tourism marketers should develop a variety of programs to address unfavorable perceptions, such as by conveying the positive benefits of learning and self-discovery, through solo traveling.

In addition, the findings show that family may pressure solo tourists into finding a travel companion so that they are no longer 'solo' travelers. Here, tourism marketers can promote how solo traveling could enable individuals to expand their social networks by meeting new individuals *at the destination*, instead of finding a travel partner a priori, or prior to departure. In doing so, solo traveling could further enable individuals to develop their capabilities and personal skills, thus enhancing their level of self-understanding that is critical in memorable tourism experiences (Tung & Ritchie, 2011)

DMOs can also use this scale as an assessment tool to evaluate whether their communication strategies have eased the concerns of solo travelers, which are aimed at

addressing the constraints from influencers (i.e., family). Visitor surveys with previous solo travelers could help DMOs uncover how tourists have negotiated their constraints, while surveys with on-site tourists could help DMOs understand how well their destination is currently addressing these constraints. Visitor surveys with potential solo travelers could also help DMOs identify areas of improvement in order to address each of the three dimensions specifically.

DMOs can obtain additional useful marketing segmentation information by using this scale. For example, tourism marketers can identify different market segments based on travel constraints; are potential solo tourists of a specific gender more likely to face family pressures on intrapersonal constraints? Are potential solo tourists from a specific age group more likely to have family members who think that they do not have enough skills to travel alone? Furthermore, are potential solo tourists at a certain stage of the lifecycle more likely to face family obligations such that their family does not want them to spend time on solo traveling? In doing so, DMOs can tailor their marketing programs to effectively address the travel constraints of their target customers.

Limitations and future research

There are limitations and opportunities for future research. Respondents were recruited via convenience and snowball sampling from the researcher's networks, and the questionnaire was distributed via an online survey platform. These respondents could be more connected and educated, and hence, influences from their family could be different than if respondents were recruited from relatively less developed areas in China. Furthermore, these respondents represented middle class family with household incomes generally higher than tourists from less developed regions; hence, the selected sample is not generalizable to the whole country.

Existing studies on solo travelers have largely concentrated on Western context, and this study contributes to the literature with an Asian perspective. Future studies can continue on this line of inquiry with more cross-cultural research. In addition, existing research on solo travel have typically focused on young and middle-aged tourists. Indeed, there is an opportunity for future studies to examine the perspectives and constraints of the senior solo travelers given the growing importance of the senior travel market.

REFERENCES

Ashmore, R. D., & Del Boca, F. K. (1986). *The Social psychology of female-male relations: A critical analysis of central concepts.* Cambridge: Academic Press.

Bearden, W. O., Netemeyer, R. G., & Teel, J. E. (1989). Measurement of consumer susceptibility to interpersonal influence. *Journal of Consumer Research, 15*, 473–481.

Bentler, P. M. (1992). On the fit of models to covariances and methodology to the bulletin. *Psychological Bulletin, 112,* 400-404.

Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin, 88,* 588-606.

Bianchi, C. (2016). Solo Holiday Travellers: Motivators and Drivers of Satisfaction and Dissatisfaction. *International Journal of Tourism Research*, *18*(2), 197-208.

Cao, J. X. (2009). The analysis of tendency of transition from collectivism to individualism in China. *Cross-Cultural Communication, 5* (4), 42-50.

Chiang, C. Y., & Jogaratnam, G. (2005). Why do women travel solo for purposes of leisure? *Journal of Vacation Marketing, 12* (1), 59-70.

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing MI. *Structural Equation Modeling, 9*, 235-255.

Choi, H. C., & Sirakaya, E. (2005). Measuring residents' attitude toward sustainable tourism: development of sustainable tourism attitude scale. *Journal of Travel Research, 43*, 380-394.

Chu, K. H., & Murrmann, S. K. (2006). Development and validation of the hospitality emotional labor scale. *Tourism Management, 27*, 1181-1191.

Chung, J. Y., Baik, H. J., & Lee, C. K. (2016). The role of perceived behavioral

control in the constraint-negotiation process: The case of solo travel. *Leisure Studies, 5*, 1-12.

Churchill, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, *26*, 64–73.

Crawford, D. W., & Godbey, G. (1987). Reconceptualizing barriers to family leisure. *Leisure Sciences, 9* (2), 119-127.

Crawford, D. W., Jackson, E. L. & Godbey, G. (1991). A hierarchical model of leisure constraints. *Leisure Sciences, 13* (4), 309-320.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16,* 297–334.

Du Xing Ke: Bu Shi Ling Lei Shi Qu Shi [Solo Travel: It Is Not Weird; It Will Be the Trend]. (2016, February). *China National Tourism*. Retrieved from http://www.183read.com/magazine/article_775938.html

Economist. (2016). *China's mobile Internet: WeChat's world*. Retrieved from http://www.economist.com/news/business/21703428-chinas-wechat-shows-way-social-medias-future-wechats-world

Fan, X. (1995). The Chinese cultural system: Implications for cross-cultural management. *S.A.M. Advanced Management Journal, 60* (1), 14-20.

Fan, Y. (2000). A classification of Chinese culture. *Cross Cultural Management, 7* (2), 3-10.

Li, J., Wang, L., & Fischer, K. (2004). The organisation of Chinese shame concepts? *Cognition and Emotion*, *18*(6), 767-797.

Floyd, F. J., & Widaman, K. (1995). Factor Analysis in the Development and Refinement of Clinical Assessment Instruments. *Psychological Assessment, 7* (3), 286-299.

Foo, L. M. (1999). International solo travelers to Australia. *Bureau of Tourism Research Report, 1* (2), 1-5.

Francken, D.A., & Van Raiij, M. F. (1981). Satisfaction with leisure time activities. *Journal of Leisure Research, 13*, 337-352.

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

Fung, H., & Chen, E. C. H. (2001). Across time and beyond skin: Self and transgression in the everyday socialization of shame among Taiwanese preschool children. *Social Development*, *10*(3), 419-437.

Gilbert, D., & Hudson, S. (2000). Tourism demand constraints: A skiing participation. *Annals of Tourism Research, 27* (4), 906-925.

Godbey, G., Crawford, D., & Shen, X. Y. (2010). Assessing hierarchical leisure constraints theory after two decades. *Journal of Leisure Research, 42* (1), 111-134.

Hair, J. F., Anderson Jr. R. E., Tatham R. L., & Black, W. C. (1998). *Multivariate data analysis. 5th edition.* New York: Prentice Hall.

Hawkins, B. A., Peng, J., Hsieh, C. H., & Eklund, S. J. (1999). Leisure constraints: A replication and extension of construct development. *Leisure Sciences, 21* (3), 179-192.

Hinkin, T. R., Tracey, J. B., & Enz, C. A. (1997*). Scale construction: Developing reliable and valid measurement instruments.* Retrieved from Cornell University, School of Hotel Administration site: http://scholarship.sha.cornell.edu/articles/613

Hsu, H. C., Kang, S. K., & Lam, T. (2006). Reference group influences among Chinese travelers. *Journal of Travel Research, 44* (4), 474-484.

Hu, L., & Bentler, P. M. (1999). Cut off criteria for fit indexes in covariance

structure analysis: Conventional criteria versus new alternatives. *Structural Equation Model, 6*, 1-55.

Hubbard, J., & Mannell, R. C. (2001). Testing competing models of the leisure constraint negotiation process in a corporate employee recreation setting. *Leisure Sciences, 23* (3), 145-163.

Hyde, K. F., & Lawson, B. (2003). The nature of independent travel. *Journal of Travel Research, 42* (1), 13-23.

Jackson, E. L. (1988). Leisure constraints: A survey of past research. *Leisure Sciences, 10* (3), 203-215.

Jackson, E. L. (1993). Recognizing patterns of leisure constraints: Results from alternative analysis. *Journal of Leisure Research, 25* (2), 129-149.

Jöreskog, K., & Sörbom, D. (1996). *LISREL 8: User's Reference Guide*. Chicago: Scientific Software International.

Kaiser, H. F. (1974). An Index of Factorial Simplicity. *Psychometrika, 39*, 31-36.

Kehoe, J. (1995). *Basic item analysis for multiple-choice tests.* Retrieved from http://www.cua.edu/www/eric_ae/digests/tm9511.htm

Kim, J. H., Ritchie, B. & Mccormick, B. (2012). Development of a scale to measure memorable tourism experience. *Journal of Travel Research, 51* (1), 12-35.

Laesser, C., Beritelli, P., & Bieger, T. (2009). Solo travel: Explorative insights from a mature market (Switzerland). *Journal of Vacation Marketing, 15* (3), 217-227.

Lam, C. M. (2007). *Not grown up forever: A Chinese conception of adolescent development.* New York: Nova Science Publishers, Inc.

Lankford, S. V., & Howard, D. R. (1994). Developing a tourism impact scale. *Annals of Tourism Research, 17* (4), 121–139.

Larsen, S., Brun, W., & Ogaard, T. (2009). What tourists worry about—Construction

of a scale measuring tourist worries. *Tourism Management, 30*, 260-265.

Liu, S. H., & Zhao, Q. J. (2010). Position and ration of family in traditional Chinese culture [Jia Ting Zai Zhong Guo Chuan Tong Lun Li Zhong De Shi Dian Di Wei Ji Qi Sheng Tai He Li Xing]. *Journal of PLA Nanjing Institute of Politics, 26* (4), 26-30.

Mehmetoglu, M., Dann, G. M., & Larsen, S. (2001). Solitary travellers in the Norwegian Lofoten Islands: Why do people travel on their own? *Scandinavian Journal of Hospitality and Tourism, 1* (1), 19-37.

Meng, F. (2010). Individualism/collectivism and group travel behavior: A cross-cultural perspective. *International Journal of Culture, Tourism and Hospitality Research, 4* (4), 340-351.

Millward Brown. (2015). *Visa global travel intentions study 2015*. Retrieved from http://www.visamiddleeast.com/me/common/include/uploads/VisaTravelIntentions2015.pdf

Nelson, L. J., Duan, X. X., Padilla-walker, L. M., & Luster, S. S. (2013). Facing Adulthood: Comparing the Criteria That Chinese Emerging Adults and Their Parents Have for Adulthood. *Journal of Adolescent Research, 18* (2), 189-208.

Netemeyer, R. G., Bearden, W. O., & Sharma, S. (2003). *Scaling procedures: Issues and applications*. Thousand Oaks, CA: Sage Publications.

Newman, A. A. (2010, April 19). The power of one. *Brandweek*, p.14.

Nyaupane, G. P., & Andereck, K. L. (2007). Understanding travel constraints: Application and extension of a leisure constraints model. *Journal of Travel Research, 46* (4), 433(7).

Pennington-gray, L., & Kerstetter, D. (2002). Testing a constraints model within the context of nature-based tourism. *Journal of Travel Research, 40* (4), 416-423.

Peter, J. P., & Churchill, G. A. (1986). Relationships among research design choices and psychometric properties of rating scales: A meta-analysis. *Journal of Marketing Research, 33,* 1–10.

Raymore, L., Godbey, G., Crawford, D., & Von Eye, A. (1993). Nature and process of leisure constraints: An empirical test. *Leisure Sciences, 15* (2), 99-113.

Rosenbloom, S. (2012, November 2). Single for the holidays. *The New York Times*. Retrieved from http://www.nytimes.com/2012/11/04/travel/single-for-the-holidays.html?_r=0

Schaefer, R. T. (2000). *Sociology: A brief introduction.* USA: McGraw-Hill.

Sung, K. T. (2001). Elder respect: Exploration of ideals and forms in East Asia. *Journal of Aging Studies, 15* (1), 13-26.

Tung, V. W. S., & Ritchie, J. R. (2011). Exploring the essence of memorable tourism experiences. *Annals of Tourism Research*, *38*(4), 1367-1386.

Walker, G. J., Jackson, E. L., & Deng, J. (2007). Culture and leisure constraints: A comparison of Canadian and Mainland Chinese university students. *Journal of Leisure Research, 39* (4), 567-590.

Wilson, E. (2004). *A "journey of her own"? The impact of constraints on women's solo travel* (Doctoral Thesis). Retrieved from http://epubs.scu.edu.au/tourism_pubs/26/

Wilson, E., & Little, D. E. (2008). The solo female travel experience: Exploring the "geography of women's fear". *Current Issues in Tourism, 11* (2), 167-186.

Wu, A. D., Li, Z., & Zumbo, B. D. (2007). Decoding the meaning of factorial invariance and updating the practice of multi-group confirmatory factor analysis: A demonstration with TIMSS data. *Practical Assessment, Research & Evaluation, 12* (3), 1-26.

Wu, P., Robinson, C. C., Yang, C., Hart, C. H., Olsen, S. F., Porter, C. L., Jin, S., Wo, J. & Wu, X. (2002). Similarities and differences in mothers' parenting of preschoolers in China and the United States. *International Journal of Behavioral Development*, *26*(6), 481-491.

Xia, Y. R., Xie, X. L., Zhou, Z., Defrain, J., & Combs, R. (2004). Chinese adolescents' decision-making, parent-adolescent communication and relationships. *Marriage & Family Review, 36* (1-2), 119-145.

Xu, Z. Y., Wan, W. C., Mussen, P., Shen, J. X., Li, C. M., & Cao, Z. F. (1991). Family socialization and children's behavior and personality development in China. *The Journal of Genetic Psychology, 152* (2), 239-253.

Yang, K. S. (1981). Social orientation and individual modernity among Chinese students in Taiwan. *The Journal of Social Psychology, 113*(2), 159-170.