

## **Value co-creation and co-destruction through adult child-parent interactions during family vacations: Scale development and validation**

**Abstract:** Although numerous benefits of family vacations have been recognized, the value of family interactions during tourism activities remains under-explored in the literature. Through a series of dual-perspective studies using both qualitative and quantitative approaches, this research developed and validated two multidimensional datasets to measure value co-creation and co-destruction from the perspectives of adult children and their parents on family vacations. The results demonstrate that interactions between adult children and their parents may lead to co-created and co-destroyed value, and that children and parents perceive interactive value structures differently. The research also identified two antecedents (family role clarity and prior knowledge) and one consequence (overall experience evaluation) of value co-creation and co-destruction. By developing and validating an effective dual scale for assessing value co-creation and co-destruction through adult child-parent interactions during family vacations, this study advances research on family travel and provides practical evidence that help improve the family travel experience.

**Keyword:** family vacation, adult child-parent interaction, value co-creation, value co-destruction, dual scale

## 1. Introduction

Population aging and increased longevity have led to an increase in adult children traveling with their older parents, and this is especially true in Asian countries where filial duty is highly valued (Yi et al., 2022). Despite the availability of many other travel options, family vacations still hold a significant market share, which is partly attributed to their positive impacts on the creation of family values (Lehto et al., 2009; Fu & Lehto, 2018). Being on holiday enables families to enjoy unique settings away from home, where they can interact and engage in collective activities that facilitate the development of family values (Fu & Lehto, 2018). While numerous benefits have been identified in relation to family vacations, including escape and relaxation, experiential learning, and improved quality of life (Lehto et al., 2017; Jepson, Stadler, & Spencer, 2019), the precise values created by adult child-older parent family tourism remain unclear.

Research has acknowledged the potential of value co-creation and co-destruction in family tourism involving adult children and their parents (Jia et al., 2023; Yao et al., 2020), but few studies have established valid measures. Existing scales developed in service industries to measure value co-creation and co-destruction, such as the customer value co-creation behavior scale (Yi & Gong, 2013) and the value co-destruction scale from the employee-customer perspective (Guan et al., 2020), are inadequate for capturing the unique values created by family vacations. Family system theory suggests that families are interactive systems in which each member affects and adapts to the rest of the system (Lehto et al., 2017). Family vacations are a part of the family system, with family members acting as a cohesive unit and engage in collective experiences (Fu & Lehto, 2018). The value created during a family vacation is determined not solely by each family member's individual experience but also by the dynamics within the family system. Hence, it is essential to consider how family tourists co-create value through interactions within the family system.

Most studies of values formed through interactions focused solely on one interacting group, without considering the perspectives of the other parties in interactions. However, value is always subjective and varies from person to person, as it reflects an individual's appraisal of the meaningfulness of a target (Fu & Lehto, 2018). To effectively identify and capture the values generated through interactions, it is crucial to conceptualize and measure these values from the perspective of both interacting parties (Busser & Shulga, 2018; Gandhi, Sachdeva, & Gupta, 2019). Research has indicated that perceptions of the family vacation experience differ among family members by generation, due to differences in background and characteristics (Li, Xu, & Chen, 2020). To address these issues, a set of dual multidimensional scales is required to consider the dichotomous viewpoints of adult children and their parents.

This study is theoretically guided by family system theory and script theory. Family system theory regards the family as a mutual causative system, where interactions between family members are crucial for understanding individual behavior and emotions (Johnson & Ray, 2016). Though this theory can help to reveal the family dynamics and collective behaviors across generations (Fu, Lehto, & Park,

2014), it does not provide detailed insights into how interactions function or how value is created or destructed. This gap can be filled by script theory, which explores the beliefs, expectations, and roles shaping interactions within the family (Miao, Mattila, & Mount, 2011). The theory is particularly useful for analyzing how value is created or destructed (Jarvi, Keranen, & Ritala, 2020). Thus, we introduce script theory as a complementary framework to family system theory, providing a deeper understanding of how adult child-parent interactions during travel result in value co-creation and co-destruction. Moreover, family system theory emphasizes the importance of family role clarity in fostering successful value co-creation (Rosenbusch & Cseh, 2012), while script theory suggests that tourists' prior travel knowledge serves as a script to guide value creation (Manthiou et al., 2016; Im & Qu, 2017). To test whether family role clarity and prior knowledge are factors that contribute to value creation during family vacations, we propose a nomological network that integrates elements of family system theory and script theory. We also test the impact of value creation by family tourists on their overall evaluations of the experience.

Our research has two main aims. First, we aim to identify the various dimensions of value co-creation and co-destruction that arise from interactions between adult children and their parents within a tourism context. We follow the rigorous scale development procedure suggested by Churchill (1979) and create a comprehensive, multidimensional dual scale that reflects the perspectives of both parties. Second, we investigate the relationships between family role clarity, prior knowledge of family vacations, value co-creation and co-destruction through adult child-parent interactions, and overall experience evaluation. Through this investigation, we aim to demonstrate the nomological validity of the measurement scale. This study represents the first empirical examination of the value created through family vacations, together with the development of a novel and valid dual scale for measuring this value. The results will contribute to the development of family system theory and script theory in the context of tourism and provide practical evidence on how to optimise the family travel experience.

## **2. Literature review**

### **2.1 Family vacation**

Family vacations have emerged as a significant market within the tourism industry, attracting increasing attention from scholars. Previous literature on family tourism has extensively explored various aspects of the topic, including motivations for travel (Li et al., 2017), decision-making (Lien et al., 2018; Li, Lin, & Feng, 2023), travel functions (Miyakawa & Oguchi, 2022), and the overall travel experience (Rojas-De-Gracia & Alarcón-Urbistondo, 2020; Li et al., 2020). However, there has been a recent surge in scholarly interest regarding the interaction dynamics between adult children and their parents during family travel. As children age, their roles in family vacations undergo a transformation, granting them greater decision-making power and potentially involving them in assuming some of their parents' responsibilities (Jia, Yao, & Fan, 2022; Watne, Brennan, & Winchester, 2014). This evolution in the roles of children has resulted in increased complexity in the

interaction between these two generations. For instance, Yao et al. (2020) identified potential conflicts that may arise between adult children and their parents during travel. Heimtun (2019) revealed that holidaying with aging parents can be full of duties, responsibilities, and burden, leading to ambivalent emotional experiences. Jia et al. (2023) uncovered the coexistence of both positive and negative interactions between adult children and their parents during travel. Despite the potential for both positive and negative outcomes, current studies have not comprehensively captured the interactive values associated with adult child-parent travel.

## **2.2 Value created by C2C interaction**

The concept of value in marketing can be interpreted in various ways (Gummerus, 2013; Lin, Chen, & Filieri, 2017). Within the tourism and hospitality industries, value is generated when travelers use and experience services within their own experiential contexts (Lin et al., 2017). This suggests that the value of tourism is inherent in and derived from travel experiences of tourists. Travel-related interactions with human, digital, and physical interfaces are seen as essential parts of the tourist experience (Jarvi et al., 2020). Therefore, research into how tourism value is created must move beyond individual actor' behaviors and instead focus on the interactions between various actors (Dolan, Seo, & Kemper, 2019). Understanding how value is formed has long been a key priority in the marketing research (Kim, Shin, & So, 2022). The role of C2C interactions in value creation is well acknowledged (Heinonen, Jaakkola, & Neganova, 2018; Guan et al., 2020), and existing research on value creation via C2C interaction consists of two main streams, namely, value creation processes and value creation outcomes (Heinonen et al., 2018). The former concerns the parties, activities, and resources involved in the procedure of creating value, while the latter explains the value outcomes perceived by customers (or any one party) involved (Gummerus, 2013). A rich set of value outcomes that customers experience as a result of C2C interaction has been revealed (Busser & Shulga, 2018), and in this process, both positive (i.e., value co-creation) and negative (i.e., value co-destruction) value outcomes were identified (Sthapit & Björk, 2020; Kim et al., 2022).

### **2.2.1 Value co-creation**

The conceptualization of value co-creation is well-documented in the literature. Lin et al. (2017) asserted that value co-creation encompasses a process of resource exchange, wherein interacting actors facilitate the mutual generation of value. Sthapit and Björk (2020) suggested that value co-creation can yield benefits for each actor involved in interactions and extend beyond individual experiences to encompass collective experiences shaped by their social contexts. Pera, Occhiocupo, and Clarke (2016) proposed that value co-creation entails a reciprocal exchange of knowledge between suppliers and customers, with consumers serving as essential contributors to value creation. Despite variations in the precise definitions, these studies collectively illustrate that value co-creation occurs through collaborative and interactive processes between dyadic partners, resulting in benefits for all involved actors. An emerging body of research has developed scales for measuring value co-creation as a process. For example, a two-dimensional customer value co-creation behavior scale (e.g., customer participation behavior, customer citizenship behavior) was constructed by Yi

and Gong (2013). Three value co-creation processes that occur before a trip (i.e., travel organization, information seeking, and mental time travel) were identified by Eletxigerra, Barrutia, and Echebarria (2021). Few studies are concerned with the outcomes of value co-creation, which include Busser and Shulga (2018), who developed a five-dimensional co-created value scale (e.g., meaningfulness, contribution, collaboration, recognition, and emotional response) in the tourism and hospitality context. Given that value co-creation outcomes have been acknowledged in the marketing research as key to grasping consumer behavior (Winston et al., 2022), developing a better understanding of the outcomes of value co-creation is necessary for integrating customer resources into service processes.

### 2.2.2 Value co-destruction

The literature presents inconsistent definitions of value co-destruction. Plé and Chumpitaz Cáceres (2010) defined it as an interactional process between service systems that leads to a decline in the well-being of at least one of the systems. Echeverri and Skålén (2011) focused on the relationship between service providers and customers, proposing that value co-destruction refers to the collaborative destruction or reduction of value caused by both parties during the interaction process. Guan et al. (2020) argued that value co-destruction stems from the misuse of resources and the misalignment of processes. Notwithstanding the range of definitions, the core understanding of value co-destruction remains consistent: it captures the diminishment of value during interactions, with at least one actor experiencing a decline in value (Dolan et al., 2019). Value co-destruction is not simply the opposite of value co-creation, but can coexist with value co-creation (Guan et al., 2020). Compared with value co-creation, the research on value co-destruction is still in the development stage, and scholars seem to vary in their views of the value co-destruction processes and the determinants of its outcomes. For example, Guan et al. (2020) revealed a five-dimensional measurement scale of value co-destruction behavior in tourism. Yeh et al. (2020) developed a construct of value co-destruction outcomes consisting of negative eWOM, negative emotion, desire for recovery, and desire for revenge. Regardless of whether these studies are concerned with the co-destruction processes or the value outcomes, they mostly focus on the actors in the service interaction interface (i.e., employees and customers, customers and customers), while studies on value co-destruction in tourist groups (i.e., family members) are relatively rare.

## **2.3 Value co-creation and co-destruction through interaction between family tourists**

The value created in family travel is often viewed in terms of family tourists' subjective experiences, with interactions and shared activities considered to be critical components of their tourism experiences (Fu & Lehto, 2018). Family travel offers a unique opportunity for value creation, as family members can influence each other's experiences and perceptions during their holiday, resulting in the unconscious generation of value (Lehto et al., 2017). According to family system theory, families are highly interconnected and interactive units in which family members can interact in both constructive and destructive ways (Haefner, 2014; Rosenbusch & Cseh, 2012),

offering potential for value co-creation and co-destruction during family vacations. Specifically, family systems value cohesion and solidarity (Aslan, 2009). Family vacations take place within the family system as a “home away from home”, and family members share the same identities and purposes there (Fu & Letho, 2018). Positive interactions, such as shared activities, improved communication, and emotional and functional support are more intense in family vacation (Jia et al., 2023; Fu & Letho, 2018). As a result, a favorable value perception may arise from this. In contrast, differentiation may allow for negative family interactions and the resultant value co-destruction. Differentiation is a key concept of family system theory that refers to individuals’ ability to distinguish themselves from the family on a personal and intellectual level (Haefner, 2014). Because of intergenerational differences, parents and adult children have distinct travel preferences and needs (Jia et al., 2023); if they both demonstrate differentiation and make self-directed decisions, unpleasant interactions and value co-destruction could ensue.

Script theory offers an additional and complementary framework for delving into the specifics of how value co-creation and co-destruction take place during family holidays. Script theory explains how people anticipate the actions of others in a certain situation, and then act accordingly, which has a significant impact on the perceived outcomes (Miao et al., 2011; Jarvi et al., 2020). From the script theory perspective, value co-destruction in the service context derives from the actors’ inability or unwillingness to follow scripts as expected by the other actors, whereas value co-creation stems from both actors following the script as predicted (Jia et al., 2023; Jarvi et al., 2020). In the context of family vacation, adult children and their parents are also likely to judge each other’s behavior using their scripts (Jia et al., 2023). If both sides align with the expected scripts, the potential for value co-creation increases, conversely, if either or both parties run mismatched scripts, value co-destruction potential emerges. Although some studies have aimed to understand value co-creation in family travel settings (e.g., Fu & Lehto, 2018), there is a dearth of research focusing on value co-destruction. In reality, family tourists may experience a decrease in value due to negative interactions caused by script misalignment. Visitors create their own scripts based on prior tourism experiences or similar consumption scenarios (e.g., shopping, dining out) (Erasmus, Bishoff, & Rousseau, 2002). Due to the varying consumption and travel experiences of parents and adult children, the scripts they develop may differ to some extent. This can lead to script misalignment and negative interactions in the adult child-parent travel space, resulting in the destruction of their value perception (Yao et al., 2020; Jia et al., 2022).

Drawing on family system theory and script theory, this study proposes that value co-creation or co-destruction during family vacations can be attributed to constructive or destructive interactions resulting from script alignment or misalignment between adult children and their parents. Accordingly, value co-creation during family travel is defined as the added value that results from meeting or exceeding the expectations of both parties during interactions and resource exchanges (Fu & Letho, 2018). Value co-destruction, on the other hand, is defined as an outcome that arises when parents and children rely on incongruent elements of practice, such as

when one or both parties fail to meet their expectations during a specific interaction, leading to a value loss (Quach & Thaichon, 2017). The conceptualization of value co-creation and co-destruction distinguishes itself from others by recognizing families as highly interconnected and interactive units, wherein family members engage in collective experiences and exert a more pronounced influence on each other.

#### **2.4 Role clarity, prior knowledge, value co-creation, and value co-destruction**

Role clarity refers to the extent to which individuals understand their role expectations and responsibilities (Zhang, Wei, & Grey, 2021). Family roles are the specific responsibilities, rights, and expectations that family members have to maintain the family unit (Lu & Lin, 1998). Family role clarity, therefore, is the presence of established patterns of behavior for handling a set of family functions, which typically occurs when tasks are clearly assigned and responsibly carried out by family members (Epstein, Baldwin, & Bishop, 1983). Although family role clarity has been studied in the field of sociology, it has not been addressed in the tourism context. However, role clarity in family travel is of great concern because family members often take on multiple roles while traveling (as, e.g., decision makers, coordinators, or influencers) (Yang, Khoo-Lattimore, & Yang, 2020). The expectations for these roles may not be clear in the complex family tourism context and it is thus common for family tourists to be confused about their roles (Jia et al., 2023). As such, how the role clarity of family tourists affects their experience and perception of value is worth investigating.

Family system theory holds that a healthy family system is an open and adaptive one (Rosenbusch & Cseh, 2012), and it can be assessed upon the family adaptability (i.e., the family's ability to adjust and respond to changing circumstances) (Letho et al., 2009). Families that are high in adaptability are able to navigate transitions and challenges more effectively, leading to improved family interactions and reduced conflict (Letho et al., 2009). Family roles, as an inherent component of family adaptability, can also play an important role in promoting family interactions and reducing family conflicts (Rosenbusch & Cseh, 2012). Clear role expectations and boundaries assist family members in understanding their responsibilities and places within the family system, as well as fostering a sense of belonging and autonomy, all of which help to promote overall family functioning and value creation (Epstein et al., 1983; Letho et al., 2009). In contrast, when people are uncertain about their role expectations, they may feel uncertainty and reluctant to act, family adaptability will suffer and thereby resulting undesirable group interactions and value creation outcomes in specific circumstance (Kang et al., 2020; Mukherjee & Malhotra, 2006). As such, we suggest that family tourists who are not clear about their roles are more likely to experience negative interactions, from which value co-destruction will result. In contrast, family tourists who can clarify their roles are more likely to experience positive interactions that lead to value co-creation. The following hypotheses are thus proposed.

H1a: Role clarity in family tourism is positively associated with value co-creation.

H1b: Role clarity in family tourism is negatively associated with value

co-destruction.

Prior knowledge refers to consumers' past experience, familiarity, and expertise with a particular product or service, such as family travel in the context of this study (Beattie & Schneider, 2018). Prior knowledge is of great interest in exploring the value co-creation of the consumer experience, as it can affect consumers' attitudes, decision-making, and social interactions (Im & Qu, 2017; Beattie & Schneider, 2018). According to script theory, a visitor's previous experiences in the destination are preserved as scripts in their memory, and the well-established script can be activated to direct visitor's travel behavior (Su, Hsu, & Boostrom, 2020). Visitors with rich prior knowledge tend to have more scripts to guide their behavior, allowing them to perform better in the service process and to be more adaptable in challenging situations (Jia et al., 2023; Wong & Wan, 2013; Manthiou et al., 2016). Consequently, they are more likely to experience value co-creation instead of value co-destruction (Wong & Wan, 2013; Prayag et al., 2020). In this study, prior knowledge of family vacations can be viewed as scripts stored in the tourist's memory, which will be activated to guide their behavior when encountering similar situations during family vacations. As such, knowledgeable family tourists may better understand each other's preferences and resolve conflicts that arise during interactions, resulting in more value co-creation and less value co-destruction. The following hypotheses are proposed.

H2a: Prior knowledge of family tourism is positively associated with value co-creation.

H2b: Prior knowledge of family tourism is negatively associated with value co-destruction.

## **2.5 Value co-creation, value co-destruction, and overall experience evaluation**

Overall experience evaluation refers to customers' evaluation of overall experiences, which is essential to successful marketing because customers' ratings of their experiences impact their intention to recommend or repurchase in the future (Mathis et al., 2016). Existing studies have identified that both positive and negative outcomes of value creation can influence consumers' overall experience evaluations (Kim et al., 2022). Specifically, value co-creation can positively predict customers' satisfaction with an experience and boost their overall experience evaluations (Verleye, 2015), while value co-destruction can lead to a decline in the quality of the consumer experience and thus result in lower overall experience evaluations (Grundner & Neuhofer, 2021). In the current research, we argue that the overall experience evaluations of family tourists may be driven by their value co-creation and co-destruction experiences. From the script theory perspective, value co-destruction often results from actors' inability or unwillingness to follow or exceed expected scripts during interactions, which may lead to a decline in overall experience evaluations (Kim et al., 2022; Jarvi et al., 2020). Conversely, value co-creation often occurs when each member's needs and wants are met or exceeded, which may result in improved quality of interactions and experiences and increased overall experience evaluations (Jia et al., 2023). The following hypotheses are thus proposed.

H3a: The value co-created by adult child-parent interaction is positively associated with their overall experience evaluation of the travel experience.



H3b: The value co-destroyed by adult child–parent interaction is negatively associated with their overall experience evaluation of the travel experience.

Based on family system theory, script theory, and the aforementioned hypotheses, the study proposes that both role clarity and prior knowledge are essential for promoting value co-creation and reducing value co-destruction during family holidays. Moreover, increased value co-creation and reduced value co-destruction are expected to enhance overall experience evaluations. Thus, value co-creation and co-destruction may mediate the relationship between role clarity, prior knowledge, and overall experience evaluation. We posit that:

H4a: Value co-creation mediates the relationship between family role clarity and overall experience evaluation.

H4b: Value co-destruction mediates the relationship between family role clarity and overall experience evaluation.

H5a: Value co-creation mediates the relationship between prior knowledge and overall experience evaluation.

H5b: Value co-destruction mediates the relationship between prior knowledge and overall experience evaluation.

### **3. Research design**

The research subjects for this study consisted of young adults aged 18 to 34 years old and their parents, chosen for several specific reasons. Firstly, this age range is commonly referred to as the “young adult years” boundary (Prayag & Hosany, 2014). The interaction between children in this age group and their parents is particularly complex, as these children were born during China’s societal transition from traditional to modern values, while their parents were raised in traditional Chinese society (Yao et al., 2020). As a result, these two generations have different values and preferences (Jia et al., 2023). The complexity of their interactions and the experiential value can thus be predicted accordingly. Secondly, role clarity within families with young adult children is a significant concern. These individuals take on multiple responsibilities as they move into adulthood (Benson & Furstenberg, 2006). This can make it challenging to distinguish their roles from those of their parents, highlighting the importance of role clarity in such families.

To ensure that the interactive experience between adult children and their parents was not confounded by other obligations, this study focused solely on family travel that involved only two generations: adult children and their parents. To achieve this, screening questions were included at the beginning of the survey. Participants were asked whether they had traveled with their parents/adult children within the past three years, and whether there were any other companions on the trip, such as siblings or members of the third generation. Only adult children and parents who had traveled together without any other companions were eligible to participate in the survey.

Adult children and parents, as two parties to an interaction, exhibit different beliefs and core values in family travel (Yao et al., 2020), and their perceptions of value co-creation and co-destruction may differ. Therefore, to fully understand the value created by their interaction, dual scale development and verification were carried out in this study (Li, Wang, Chen, 2019; Tsaur, Yen, & Teng, 2018). Two

sequential dual studies with both qualitative and quantitative methods were conducted (Gandhi et al., 2019). First, Study 1 developed a dual measurement scale of value co-creation and co-destruction in accordance with the dichotomous perspectives of adult children and parents through a series of dual approaches (i.e., dual interviews, netnography, and dual survey). Churchill's (1979) scale development procedure was followed (see Figure 1). Then, the dual scale developed in Study 1 was used in Study 2 to examine the relations among role clarity, prior knowledge, value co-creation and co-destruction, and overall experience evaluation. An additional dual survey was conducted to test the causal models.

[Insert Figure 1 here]

#### **4. Study 1: Scale development**

##### **4.1 Dimension identification and item construction**

###### **4.1.1 Qualitative data collection**

A detailed framework of items for measuring value in family tourism was not found in the existing literature. As such, scale development has resorted to direct inputs from the target population (Qin & Hsu, 2022). Dual interviews and netnography were applied to identify dimensions and items of value created through adult child-parent interaction (Li et al., 2019; Tsaur et al., 2018). The relevant literature was further reviewed to supplement the items obtained from interviews and netnography. Data collection followed an abductive process in which emerging insights guided subsequent data collection attempts (Jarvi et al., 2020). Accordingly, a three-stage data collection process was performed (from July to September 2021), and information related to interaction and value creation on family vacations was assessed from the differing perspectives of adult children and parents. First, in-depth interviews with children were conducted. Subjects were chosen following a purposive sampling logic, with the goal of selecting children aged 18-34 years that had traveled with their parents in the past three years.

Second, in-depth interviews with the parental samples were conducted. Parental samples were collected by children inviting their parents to participate in interviews. As a result, 22 adult-child samples were identified, 12 of whom had a parent (mother or father) involved in the interview, giving a total of 34 interview participants before the theoretical saturation was achieved. The interviews were conducted separately with parents and children, with the children interviewed first, followed by their parents. The average interview lasted 50 minutes. The key research questions were posed to subjects and then singularly adapted depending on the type of respondents (i.e., parent or child) (e.g., What activities did you participate in with your parents/children in the context of tourism? Can you describe in detail an impressive event that you experienced? How did you feel about that, and how do you think your parents/children feel about that? How do you interact with your parents/children during travel? How is it different from everyday life?). Depending on how participants responded, further inquiries and questions were added, such as asking individuals who reported pleasant or unpleasant experiences if they had ever encountered the opposite. As such, the majority of participants shared both their favorable and unfavorable travel experiences. The interview adopted a

double-perspective approach, which not only asks the subjects about their own behaviors and feelings, but also about their perceived behaviors and feelings of their parents/children. Adult children and their parents differ in terms of their interpretations and evaluations of intergenerational interactions, and the values they experience from family vacation are thus somewhat different.

Third, to further complement and corroborate the interview data, this study utilized a netnography approach to access secondary data online. This approach was well-suited to capture the travel experiences between adult children and parents due to the abundance of available blogs online. Two well-known Q&A social platforms in China, Mafengwo.com and Zhihu.com, are regarded as capable online communities that offer subject-specific research, pertinent segments, and descriptive rich data (Yao et al., 2020). In order to find the most pertinent blogs for this research, one of the writers, a native Mandarin speaker and longtime user of Mafengwo and Zhihu, engaged herself in reading blogs on the experiences of adult children and their parents. Only blogs with rich information about the family vacations written by young adult children or parents were chosen. This can be determined by the blogger's profiles and self-disclosure (i.e., images, description). As a result, 53 travel blogs were selected, which was sufficient to reach theoretical saturation, as no new information emerged after analyzing the 35th blog. During the data analysis process, interview data was analyzed first, followed by the secondary data analysis. This approach allows for the supplementation of information that may not have been obtained during face-to-face interviews due to participants' desire for impression management.

#### 4.1.2 Dimension recognition and item generation

Content analysis was used to construct the conceptual dimension and compile the specific scale items. The qualitative discussion on the concept and connotation of value co-creation and co-destruction served as a theoretical foundation for the generation of dimensions. In this regard, the researchers consistently compared the concepts of two constructs and the composition of analytical materials to determine whether the extracted items and categories align with the conceptual domains of value co-creation and co-destruction. Data were divided into two parts for the exploratory and confirmatory content analysis (Zhang, Guo, & Ji, 2022). The first stage was the exploratory analysis, in which the texts of 25 interviewees (16 children and nine parents) and all travel blogs was analyzed through three-level coding. Confirmatory coding was conducted in the second stage with nine interview texts (six children and three parents), in which the data were coded independently and then compared with the exploratory codes to confirm that there were no emerging codes. Meanwhile, the tourism literature related to tourist-to-tourist interaction and value creation was also reviewed to supplement the items obtained from content analysis. Through the coding process, meaning construction, and dimension extraction, 131 initial items were generated and classified into seven dimensions for adult children (i.e., hedonic experience, family solidarity, filial commitment, enhanced knowledge, spiritual fulfillment, psychological burden, and avoidance behavior) and six dimensions for parents (i.e., hedonic experience, family solidarity, enhanced knowledge, spiritual fulfillment, psychological burden, and avoidance behavior).

#### 4.1.3 Item purification

Based on the concepts and categories derived from qualitative analysis and the principles of adequacy and content relevance, the item purification process was conducted for the scale. A panel of specialists with three doctoral students who had travelled with their parents in the last three years were invited to scrutinize the extracted items in terms of their clarity, adequacy, and relevance to the dimension. In this process, 99 initial items were retained for further expert review. Then, five professors consisting of tourism-industry personnel and scholars who are proficient in family travel research were invited to evaluate these 99 items. The professors were provided with a clear definition of value co-creation and co-destruction, along with each dimension, and were asked to rate the relevance and representativeness of the items to the related construct using a seven-point Likert-type scale (1 = not relevant/representative at all; 7 = very relevant/representative). The items that scored above the mean of 4 were retained. As such, 29 items were eliminated and 70 items were finally retained, of which 37 were for adult children and 33 were for parents. The remaining items were used to design questionnaires. Six respondents (three children and three parents) were further invited to clarify the wording of the items and improve the understandability of the questionnaires.

### 4.2 Purifying the measurement scale

#### 4.2.1 Data collection

The data collection for EFA analysis was conducted from October to November 2021. A multisource data collection process was used during this stage (Gandhi et al., 2019; Li et al., 2019). Since the development of the preliminary items was in accordance with the perspectives of adult children and parents, two sets of questionnaires were designed separately for both parties. Purposive sampling was carried out through Credamo.com, a professional Chinese online data collection platform similar to Mechanical Turk. The sample selection criteria for this study were the same as in the qualitative studies—that is, young adult children who were aged 18-34 years and had traveled with their parents in the past three years, as well as parents who had tourism experience with their adult children, were chosen as samples. All participants were asked to recall their most recent travel experiences with their parents/children and to answer questions about the values created through interaction. To enhance participants' recollection of their travel experience, some detailed questions (concerning, e.g., travel time, duration, destination visited, and the initiator of travel) were also added. As such, a total of 506 valid samples were retained after removing invalid subjects (i.e., those that were incomplete, took too long or were too short), consisting of 256 child samples and 250 parent samples. Sample demographics are shown in Table 1.

[Insert Table 1 here]

#### 4.2.2 Exploratory factor analysis

A principal component analysis and maximum variance rotation were used in this study to extract factors. The results of the EFA were shown in Table 2. After deleting items with low loadings ( $< 0.50$ ), significant cross-loadings ( $> 0.45$ ), and low commonalities ( $< 0.30$ ) (Hair et al. 2010), an adult-child scale with seven factors

and 30 items as well as a parent scale with six factors and 25 items were produced (both with eigenvalues greater than 1). The seven-factor construct of the adult-child scale accounted for 75.304% of the total variance. All of the dimensions exhibited a Cronbach's  $\alpha$  value greater than 0.70 (ranging from 0.821 to 0.942). Meanwhile, the cumulative percentage of the explained variance of the six-factor parent scale was 65.531%. The Cronbach's  $\alpha$  for each factor ranged from 0.641 to 0.924, with exceeding the threshold value of 0.6, thus indicating the internal consistency and reliability of the overall measurement.

[Insert Table 2 here]

### **4.3 Validation of the measurement scale**

#### **4.3.1 Data collection**

To verify the reliability and validity of the scale, a second-stage dual-perspective survey was conducted (Gandhi et al., 2019, Li et al., 2019). As in the first stage of data collection, two sets of questionnaires suitable for parents and children were designed and distributed through the Credamo.com platform in December 2021. The screening conditions for subjects were also kept consistent with those in Study 1. In total, 605 valid responses were collected, with 311 from adult children and 294 from parents. The demographic characteristics of the subjects are shown in Table 1.

#### **4.3.2 Confirmatory factor analysis**

CFA with maximum likelihood estimation was conducted using AMOS 17.0. The results showed a favorable goodness of fit for the adult-child scale ( $\chi^2/df = 1.308$ , CFI = 0.979, RFI = 0.904, IFI = 0.979, NFI = 0.917, RMSEA = 0.032). As shown in Table 3, the factor loading of each item ranged from 0.698 to 0.857, the CR value for each factor was higher than the threshold requirement of 0.7 (ranging from 0.783 to 0.928), and the AVE for each construct ranged from 0.546 to 0.682. Meanwhile, the model fitness index of the parent scale was  $\chi^2/df = 1.301$ , CFI = 0.978, RFI = 0.897, IFI = 0.978, NFI = 0.911, RMSEA = 0.032, thus indicating good fit for the six-factor construct. The factor loading for all 25 items was between 0.663 and 0.852, the CR was between 0.794 and 0.915, and the VAE ranged from 0.504-0.656. All values exceeded the standard threshold, signifying the satisfactory internal consistency and comprehensive reliability of the scale, and thus no further deletion of items was necessary. Moreover, discriminant validity of the two scales was also assessed and verified, where the square root of the AVE for each factor was higher than that for all factors (see Tables 4 and 5). Therefore, the scale developed in this study was deemed acceptable for further examination.

[Insert Table 3 here]

[Insert Table 4 here]

[Insert Table 5 here]

## **5. Study 2: Nomological validity**

### **5.1 Measures**

Study 2 further tested the proposed scale in a nomological network of theoretically related antecedents (family role clarity, prior knowledge) and consequences (overall experience evaluation) (see Figure 2). Family role clarity was assessed by a six-item scale adapted from Rizzo, House, and Lirtzman (1970). Items

included “We feel certain about how much authority we have,” “We have clear planned goals and objectives for our traveling,” “We know that we have divide our time properly,” “We know what our responsibilities are,” “We know exactly what is expected of us,” and “The explanation of what must be done is clear.” Four items adapted from Beattie and Schneider (2018) and Im & Qu (2017) were used to measure prior knowledge, which included “We have traveled together more than once,” “We know a lot about how to make plans and arrange activities when we travel together,” “We know a lot about how to get along when we travel together,” and “Compared to other family tourists, we have more knowledge about family holidays.” Both items for role clarity and prior knowledge were adapted to refer to family members as a whole and measured with a seven-point scale ranging from 1 (Strongly disagree) to 7 (Strongly agree). Overall experience evaluation was captured using seven-point semantic differential scales, and four items from Verleye (2015) study were adopted (e.g., dissatisfactory-satisfactory, poor-excellent, negative-positive, and disappointing-delightful).

[Insert Figure 2 here]

## 5.2 Data collection

Two sets of questionnaires were designed in accordance with the perspectives of parents and adult children, and then distributed to the target subjects through the online platform Credamo.com. The survey was conducted during the period from September to October 2022. A total of 654 questionnaires were distributed and 586 valid samples were obtained, with 289 from adult children and 297 from parents. The demographic characteristics of the samples are shown in Table 1.

## 5.3 Data analysis and results

The hypothesized relationships were examined using Smart-PLS 3.27. The model was run with the measurement for adult children (seven dimensions, 30 items) and parents (six dimensions, 25 items) separately. In both cases, the models exhibited acceptable fit indices (children:  $\chi^2 = 704.211$ ,  $\chi^2/df = 1.484$ , SRMR = 0.080, NFI = 0.791; parents:  $\chi^2 = 589.511$ ,  $\chi^2/df = 1.130$ , SRMR = 0.073, NFI = 0.793). The SEM analysis using adult-child data showed that the family role clarity perceived by adult children exerted a significant positive effect on value co-creation ( $\beta = 0.477$ ,  $t = 5.930$ ,  $p < 0.001$ ) and a significant negative effect on value co-destruction ( $\beta = -0.361$ ,  $t = 4.134$ ,  $p < 0.001$ ), thus H1a and H1b were supported. Meanwhile, prior knowledge had positive impact on value co-creation ( $\beta = 0.327$ ,  $t = 4.438$ ,  $p < 0.001$ ) and negative impact on value co-destruction ( $\beta = -0.223$ ,  $t = 2.355$ ,  $p < 0.05$ ), thus indicating that H2a and H2b were confirmed. As expected, value co-creation significantly and positively affected overall experience evaluation ( $\beta = 0.457$ ,  $t = 9.030$ ,  $p < 0.001$ ), while value co-destruction negatively predicted it ( $\beta = -0.486$ ,  $t = 11.373$ ,  $p < 0.001$ ), thus H3a and H3b were verified (see Figure 3).

Similar results were also found in the analysis of parental data. Family role clarity and prior knowledge perceived by parents both had significant and positive effects on value co-creation ( $\beta_{\text{role clarity}} = 0.391$ ,  $t = 6.158$ ,  $p < 0.001$ ;  $\beta_{\text{prior knowledge}} = 0.456$ ,  $t = 6.512$ ,  $p < 0.001$ ), but had negative effects on value co-destruction ( $\beta_{\text{role clarity}} = -0.339$ ,  $t = 4.309$ ,  $p < 0.001$ ;  $\beta_{\text{prior knowledge}} = -0.171$ ,

$t = 2.187, p < 0.05$ ) (see Figure 4). Value co-creation positively predicted overall experience evaluation ( $\beta = 0.483, t = 9.352, p < 0.001$ ), while value co-destruction negatively affected it ( $\beta = -0.409, t = 8.379, p < 0.001$ ). Hence, H1 to H3 were further verified by parental samples. These findings suggest that high levels of family role clarity and prior knowledge make it easier for both adult children and parents to experience value co-creation rather than co-destruction, which further contributes to their improved overall experience evaluation.

[Insert Figure 3 here]

[Insert Figure 4 here]

The mediating effects of value co-creation and co-destruction in the relationships between family role clarity, prior knowledge, and overall experience evaluation were further examined using the method variance accounted for (VAF) in PLS-SEM. As suggested by Hair et al. (2010), VAF can be categorized into three-stage mediation. VAF values between 0.2 and 0.8 indicate a partial mediating effect, those below 0.2 mean no mediation, while those greater than 0.8 indicate full mediation. As shown in Table 6, the analysis of mediating effects from the perspective of adult children and parents yielded more consistent results. Specifically, the effect of family role clarity on overall experience evaluation via the mediations of value co-creation and co-destruction has VAF scores between 20% and 80%, thus indicating that value co-creation and co-destruction play a partially mediating role in the relationships between family role clarity and overall experience evaluation. Meanwhile, value co-creation and co-destruction also act as partially mediators between prior knowledge and overall experience evaluation, as the VAF values of the indirect effect of prior knowledge on overall experience evaluation through value co-creation and co-destruction were  $> 0.2$  and  $< 0.8$ . Therefore, H4 and H5 were supported.

[Insert Table 6 here]

## **6. Discussion**

### **6.1 The dimensions of value co-creation and co-destruction**

This research developed a multidimensional dual scale for measuring the value created by adult child-parent interactions during travel according to the dichotomous perspectives of adult children and parents. Specifically, the adult-child scale comprised 30 items divided into five co-created constructs and two co-destroyed constructs, while the parent scale contained 25 items, divided into four co-created factors and two co-destroyed factors. The co-created constructs encapsulate the added value that emerges from script alignment and constructive interactions between adult children and their parents. In contrast, the co-destroyed constructs depict the adverse outcomes that arise when parents and children engage in destructive and incongruent practices. It is worth mentioning that there were six factors common across both samples, among which four factors (e.g., hedonic experience, enhanced knowledge, family solidarity, and spiritual fulfillment) in the case of value co-creation and two factors (e.g., avoidance tendency and psychological burden) with respect to value co-destruction. However, the items loaded on the common dimensions of spiritual fulfillment, enhanced knowledge, and psychological burden were quite different, thus indicating that the spiritual benefits, new knowledge, and psychological burden that

adult children and parents get from interaction during the trip are inconsistent. Moreover, filial commitment as a co-created value is only valid for adult children. Findings confirm the principles of family system theory, which suggests that the family is a unit where each member's feelings and emotions can impact the entire family system, resulting in shared emotions, attitudes, and behaviors among family members (Johnson & Ray, 2016; Rosenbusch & Cseh, 2012). However, family system theory also acknowledges the importance of individual autonomy within the system, recognizing that each family member has the ability to think and feel independently from the family's emotional atmosphere (Haefner, 2014).

Hedonic experience is an important component of value co-creation, as it represents a pleasurable and memorable experience that children and parents derive from their shared tourism activities. The emergence of this dimension confirmed the hedonic benefits in co-creation situations (Verleye, 2015) and verified that shared family activities can create hedonic value for family tourists (Fu & Lehto (2018). Family solidarity is another crucial construct of value co-creation. As noted by Lehto et al. (2009), vacation activities can serve as an effective means to enhance family bonding and solidarity. Family solidarity in this research emphasizes the unique opportunities that shared vacations provide to enhance the harmony and closeness felt between adult children and their parents. As such, the positive role of family travel in improving the family function was further confirmed (Wu, Kirillova, & Lehto, 2021). The third dimension of value co-creation is enhanced knowledge, which includes the new knowledge, skills, and wisdom that family members get from traveling. Since holidays usually provide an informal context for travelers in which they become curious and motivated to learn something new, the potential for family holidays to facilitate learning has been well established in existing studies (e.g., Wu et al., 2021; Lehto et al., 2017). Interestingly, parents and adult children were found to differ significantly in their access to knowledge during travel. Children pay more attention to the improvement of social skills (i.e., social interaction) and life lessons, while parents tend to focus on learning related to information technology and the improvement of traditional concepts.

Spiritual fulfillment, which concerns the spiritual benefits that tourists get from family holidays, was also found as an important construct of value co-creation. For adult children, spiritual benefits involve self-validation, increased self-worth and sense of accomplishment, while the parents' spiritual benefits involve feeling gratified, rewarded, and satisfied with family life. This is in line with the findings in previous research that children may perceive a high sense of self-worth and identity from supporting their parents to travel (Xiong et al., 2021), while parents will experience strong feelings of psychological wellbeing when traveling with their children (Yao et al., 2020; Jia et al., 2022). Filial commitment, which refers to children's desire to maintain a valued relationship with their parents, is a unique dimension of value co-creation for adult children. It includes a commitment to spend more time with their parents, to take care of their parents, and to help their parents understand new things. The significance of this dimension is supported by marketing research emphasizing that value co-creation processes allow long-term relationships to ensure the stability



of service ecosystems, of which commitment is a typical relational outcome (Busser & Shulga, 2018).

Avoidance tendency is a component of value co-destruction that highlights the decline of travel interest, visiting motivation, and willingness to interact with each other that adult children and parents experience when they traveled together. This finding is consistent with the C2C interaction research, which highlights the decline in consumers' behavioral tendencies as a result of value co-destruction (Luo et al., 2019). Psychological burden, as another factor of value co-destruction, concerns the negative psychological experiences of both parents and children. Adult children usually perceive emotional stress (e.g., concerns that they cannot do well) and mental fatigue, while parents often report declined self-efficacy (i.e., inability to make decisions) and a low sense of control due to reduced parental authority. Although previous tourism studies tend to highlight the psychological benefits family members get from vacations (e.g., Lehto et al., 2017; Xiong et al., 2021), this study found that family tourists also experience significant psychological expenditure.

## **6.2 The antecedents and consequences of value co-creation and co-destruction**

The research into role clarity and prior knowledge as the antecedents of value co-creation and co-destruction at the individual level is well established (e.g., Beattie & Schneider, 2018; Zhang et al., 2021). However, whether group role clarity and prior knowledge have an impact on value creation remain unclear. The results of this study suggest that both family role clarity and prior knowledge can significantly and positively affect value co-creation as well as negatively affect value co-destruction in the context of adult children traveling with their parents. The findings are potentially consistent with those of individual-level studies (e.g., Prayag et al., 2020; Chen, Raab, & Tanford 2015). In addition, value co-creation and co-destruction further significantly affect the overall experience evaluations of adult children and parents. The results showed that family tourists who want a favorable overall experience must be clear about their own and others' role expectations or become knowledgeable about the dynamics of family vacations, which can help them to create values with their families by interacting more effectively rather than destroy it. These findings confirmed that the integration of family system theory and script theory can effectively explain the factors contributing to both value co-creation and co-destruction during family vacations.

## **7. Contributions and limitations**

### **7.1 Conclusion**

One central question driving this study is how to measure the value created by interaction between adult children and their parents in the context of family vacations. By combining qualitative and quantitative methods, the scale development process yielded a set of dual scales, including a seven-construct measurement (30 items) for adult children and a six-construct measurement (25 items) for parents. Value co-creation and co-destruction were found in both scales, thus indicating that in addition to the positive values, adult child–parent interaction on family holidays may create undesirable values. In addition, based on family system theory and script theory, the nomological network links among family role clarity, prior knowledge, value

co-creation and co-destruction, and overall experience evaluation was tested separately for the adult-child and parental samples. It was found that family role clarity and prior knowledge influenced both value co-creation and co-destruction, which in turn had significant impacts on overall experience evaluation.

Data for this study were collected during the COVID-19, and participants (both parents and adult children) were asked to recall their most recent travel experience, which may have occurred during or before the COVID-19. The findings of this research will remain relevant and valuable in the post-COVID-19 era. Although COVID-19 has affected families' travel preference, such as to lesser-known locales, intergenerational differences and interaction styles between adult children and parents formed by their long-term living experiences will not change by COVID-19 (Bornstein, 2019; Yi et al., 2022). These are the key factors that influence the formation of interactive value of families in travel (Jia et al., 2023).

## **7.2 Theoretical contributions**

Despite its acknowledged importance, the value of family vacation has received insufficient emphasis in the tourism and hospitality literature. By exploring value co-creation and co-destruction through adult child-parent interaction during family travel, this research advances academic knowledge in three ways. First, this study deepens the understanding of the value creation of C2C interactions by investigating family tourists (Echeverri & Skålén, 2021). While previous research has developed customer value co-creation and co-destruction scale in service industries (Yi & Gong, 2013; Guan et al., 2020; Rihova et al., 2018), these scales have primarily focused on inter-group interactions between consumers and fellow consumers. This study is the first attempt to develop a scale specifically to measure the value created within intra-group interactions during family vacations. Moreover, this research is novel in developing a dual scale of value co-creation and co-destruction in family vacation. Unlike prior research that merely explored children's view of family vacation (Yao et al., 2020; Jia et al., 2022), this study synthesizes the different perspectives of adult children and parents, and captures the common and unique aspects of value perceived by two interactive parties. The balanced evaluation of both generations enables a comprehensive understanding the rich value of family vacations. Also, a series of dual approaches used in this study surpasses previous studies that developed scales from a single agent perspective, which represents the methodological contribution of this research.

Second, this study goes into uncharted territory by incorporating family system theory and script theory in a complementary manner to gain a clearer understanding of the value creation that occur during family travel. In particular, family system theory was chosen to explain the dynamic nature of interactions within the family system and their potential for both value co-creation and co-destruction, while the script theory was used as a supplement to explain the specific process by which value co-creation and co-destruction unfold. The integration of the two theories compensates for their deficiencies while emphasizing their merits. Family system theory represents a well-established framework that provides insights into family interactions. However, the existing research primarily comprises qualitative studies,

with limited empirical research due to the overarching nature of the theory (Fu & Lehto, 2018; Fu et al., 2014). This study addresses the research gap by proposing an empirical measure designed to capture the value creation of family vacations. Furthermore, while existing research has explored the value co-creation of family vacation based on family system theory, limited research has focused on value co-destruction, resulting in an incomplete understanding of the richness of family travel values. By integrating family system theory and script theory, this study bridges the research gap and provides a comprehensive understanding of value co-creation and co-destruction during family travel.

Finally, this study introduces a nomological network that draws inspiration from family system theory and script theory to elucidate the antecedents and consequences of value co-creation and co-destruction during family vacations. To the best of our knowledge, empirical investigations into the value of consumer-to-consumer (C2C) interaction within a family context are still in their early stages, with limited exploration of their antecedents and consequences. Therefore, this study advances the existing research by examining the causal relationships that underlie value creation during family travel and highlighting the pivotal role of family-level factors, such as clear family roles and extensive knowledge of family travel, in facilitating the creation of more desirable values. These findings validate the applicability of family system theory in understanding the determinants of value creation in family vacations, implying that the establishment of desirable values during such vacations necessitates the presence of clearly defined roles for all family members (Rosenbusch & Cseh, 2012). Additionally, the observed effects of prior knowledge align with the fundamental principles of script theory, which posit that individuals who possess expert knowledge tend to possess well-defined scripts that guide their actions and contribute to the generation of more desirable values (Wong & Wan, 2013).

### **7.3 Managerial implications**

This research has important practical implications for effective managerial actions. Firstly, it is widely recognized that the perceived values held by families exert a significant impact on their decision-making processes and, in turn, have implications for the overall success of tourism destinations. Therefore, an in-depth investigation into the value created by family vacations is necessary. The measurement scale developed in this research offers practitioners a comprehensive and standardized tool to assess the value of family vacations at different valences and degrees. Using this scale, destination management organizations (DMOs) can gain an objective understanding of the interaction values between adult children and their parents during vacations. For instance, DMOs can request family tourists to complete a post-tour survey using the scale to evaluate their perception of value, identify regions where family tourists are content and where they are disappointed, and then customize their offerings to enhance the experience evaluation of family vacations. Moreover, the dual instruments suitable for both adult children and parents is a significant advantage, as it allows practitioners to diagnose the values of family holidays from both parties' perspectives. By using this dual instrument, DMOs can adjust their products to fit the particular requirements and expectations of both parties,

thereby enhancing the overall value of family vacations.

Additionally, our research has identified the key drivers of value co-creation and co-destruction and demonstrated the potential of family role clarity and prior knowledge in creating value for family tourists. As such, DMOs seeking to capitalize on the value of family vacations should actively engage in projects that enhance the role clarity of family visitors. This can be achieved by promoting open communication and fostering a culture of transparency, encouraging family tourists to communicate their role responsibilities and expectations to each other openly during family vacations. DMOs can facilitate this by providing tools such as guidebooks, mobile apps, and online forums that enable family tourists to share information and exchange ideas. Family members can also establish intra-family feedback systems (e.g., create a chat group on WeChat) to gain timely insights into the dynamics of other members. Furthermore, DMOs are expected to take practical initiatives to strengthen visitors' knowledge and expertise of family travel, especially among first-time families. For instance, DMOs can create brochures or websites that focus on family travel, showcasing family-friendly hotels, restaurants, and attractions. Social media platforms can also be utilized to share advice and recommendations for family-friendly vacation spots and activities. These initiatives could provide first-time family travelers with more confidence in planning their trip and make suitable choices, allowing them to enjoy a fulfilling vacation experience.

Finally, the findings of this study regarding the value of family vacations to parents are also relevant for other countries seeking to improve the well-being of empty-nesters. Empty-nesters are individuals who have reached retirement age and have experienced significant life changes (i.e., children leaving home), which can lead to feelings of emptiness and a lack of purpose. Therefore, their well-being becomes a crucial agenda in this group. Travelling with adult children has been shown to be an effective way to boost the hedonic experience and spiritual fulfillment of empty-nesters. Thus, tourism operators are encouraged to promote adult child-parent travel in other countries. Despite their strong desire to participate in travel activities, empty-nesters may face age-related challenges that prevent them from traveling independently, such as lower physical strength and limited technical ability. Fortunately, the presence of adult children can help alleviate these challenges (Yi et al., 2022), making it practical for tourism operators to encourage adult children to support their parents in traveling. For instance, practitioners can provide information to adult children regarding the value of family trips and target them to promote family vacation products and services.

#### **7.4 Limitation and future research**

This study is not free of limitations. First, our study only focuses on families with adult children. Whether the values created by interactions between young children and their parents differ from the findings of this study is still unclear and should be explored in future research. Second, Chinese family tourists are the target group of this study. Although holiday travel by adult children and parents is more prominent in China due to the emphasis on filial piety, the cultural background may also have an impact on the interaction and value creation of family tourists. Samples

from Western cultural backgrounds can be investigated and compared with the findings of this study. Finally, although two variables (family role clarity and prior knowledge) that were rarely seen in previous studies have been shown to have significant effects on the value created by families' interactions during tourism, it may also be affected by many other factors, such as family climate and family structure, which can be verified in future studies.

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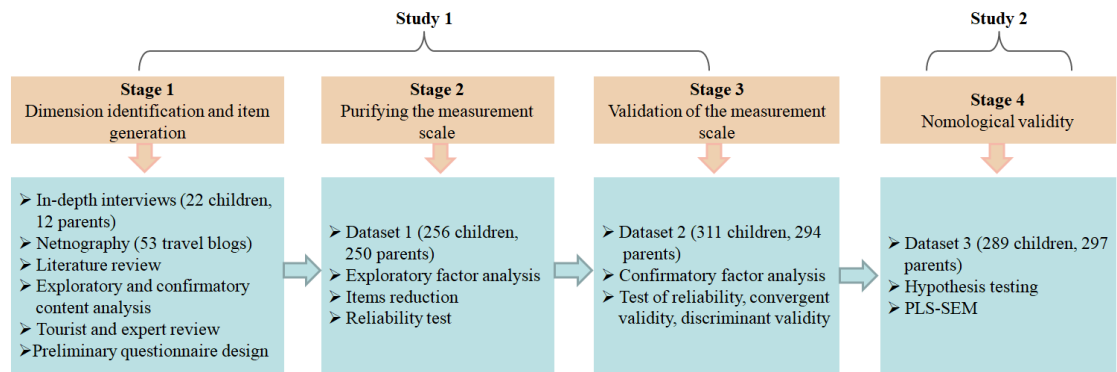


Figure 1. Scale development procedure

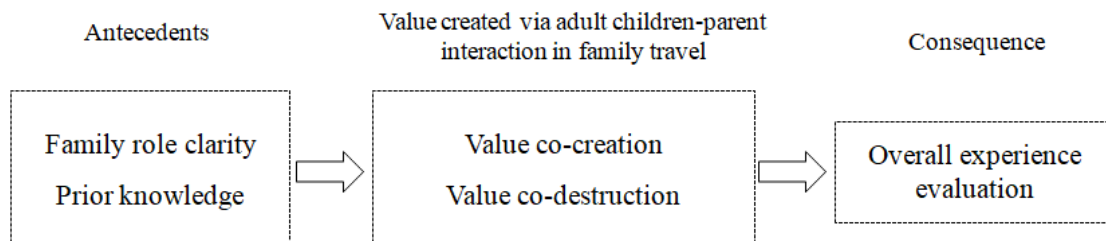


Figure 2. Hypothesized model

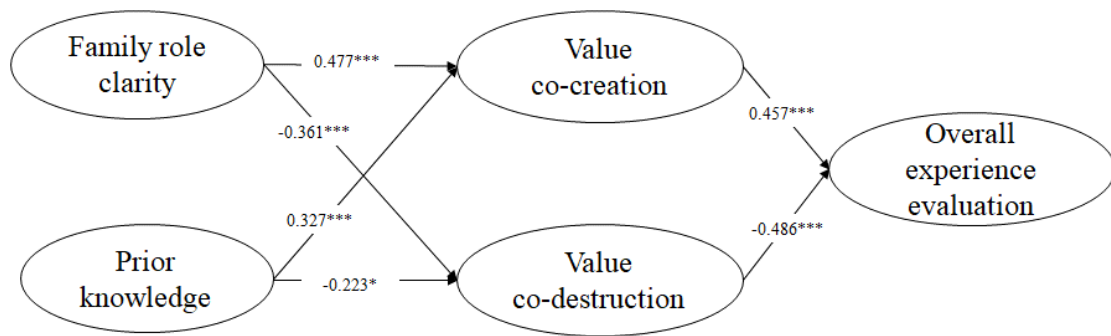


Figure 3. Structural model: Perspective of adult children

Note: \*\*\* $p < 0.001$ , \* $p < 0.05$ .

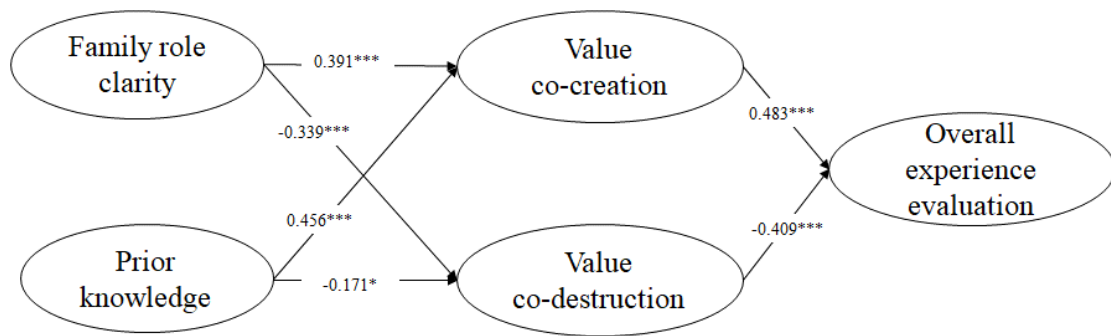


Figure 4. Structural model: Perspective of parents

Note: \*\*\* $p < 0.001$ , \* $p < 0.05$ .

Table 1. Demographics of samples

Variable		Dataset 1				Dataset 2				Dataset 3			
		Children		Parents		Children		Parents		Children		Parents	
		Frequ	%	Frequ	%	Frequ	%	Frequ	%	Frequ	%	Frequ	%
Gender	Male	100	39.1	112	44.8	115	37.0	128	43.5	157	54.3	135	45.5
	Female	156	60.9	138	55.2	196	63.0	166	56.5	132	45.7	162	54.5
Age	18–29	180	70.3	0	0	230	74.0	0	0	202	69.9	0	0
	30–39	76	29.7	2	0.08	81	26.0	0	0	87	30.1	1	0.3
	40–49	0	0	123	49.2	0	0	127	43.2	0	0	187	63.0
	50–59	0	0	84	33.6	0	0	122	41.5	0	0	86	29.0
	60 and above	0	0	41	16.4	0	0	45	15.3	0	0	23	7.7
Personal monthly income	2000 Yuan or below	34	13.3	2	0.8	61	19.6	13	4.4	60	20.8	67	22.6
	2001–4000 Yuan	29	11.3	20	8.0	45	14.5	62	21.1	90	31.1	138	46.5
	4001–6000 Yuan	35	13.7	54	21.6	88	28.3	88	29.9	80	27.7	49	16.5
	6001–8000 Yuan	57	22.3	63	25.2	49	15.8	54	18.4	33	11.4	28	9.4
	8001–10000	57	22.3	49	19.6	36	11.6	41	13.9	13	4.5	9	3.0
Numbers of joint tours	10000 Yuan or above	44	17.2	62	24.8	32	10.3	36	12.2	13	4.5	6	2.0
	1 time	22	8.6	27	10.8	26	8.4	21	7.1	25	8.7	18	6.1
	2–3 times	109	42.6	88	35.2	172	55.3	133	45.2	137	37.4	136	45.8
	4–5 times	63	24.6	50	20.0	76	24.4	81	27.6	68	23.5	72	24.2
	6 times and above	62	24.2	85	34.0	37	11.9	59	20.1	59	20.4	71	23.9

Table 2. Results of the EFA

Adult-child scale				Parent scale					
Factors/Items	Factor loading	Cronbach's $\alpha$	Variance	Factors/Items	Factor loading	Cronbach's $\alpha$	Variance		
<b>Psychological burden</b>			<b>0.939</b>	<b>37.626</b>	<b>Psychological burden</b>			<b>0.924</b>	<b>15.254</b>
I worry that I don't take good care of my parents while traveling	0.860			I can't do anything useful for family during the tour	0.866				
I worry about encountering problems that I can't overcome while traveling	0.852			I feel like I have less control in my family during the tour	0.852				
Traveling with my parents makes it difficult for me to devote enough energy to tourist activities	0.845			I feel a reduced sense of self-worth during the tour	0.850				
Traveling with my parents requires me to put in more energy	0.836			I can't make decisions during the tour	0.846				
Traveling with my parents makes me feel psychologically stressed	0.822								
I feel mentally tired when my parents don't agree with me during the tour	0.792								
<b>Avoidance tendency</b>			<b>0.942</b>	<b>13.521</b>	<b>Avoidance tendency</b>			<b>0.886</b>	<b>26.886</b>
I have the idea of no longer traveling with my parents while traveling	0.836			I don't want to talk with my child during the tour	0.832				
I lose the desire to continue visiting with my parents during the tour	0.808			I give my child the silent treatment during the tour	0.826				
I give my parents the silent treatment during the tour	0.786			I have the idea of no longer traveling with my child while traveling	0.783				
I don't want to talk with my parents during the tour	0.781			I don't want to travel with my child for a while after the trip	0.773				
My interests in the attractions decreased during the tour	0.766			My interest in the attractions decreased during the tour	0.622				
I don't want to travel with my parents for a while after the trip	0.761			I lost the desire to continue visiting with my child during the tour	0.608				
<b>Spiritual fulfillment</b>			<b>0.898</b>	<b>7.572</b>	<b>Spiritual fulfillment</b>			<b>0.641</b>	<b>5.475</b>
Traveling with my parents enhanced my sense of accomplishment	0.814			Traveling with my child makes me feel gratified by their growth	0.769				
Traveling with my parents makes me feel needed by them	0.797			Traveling with my child makes me feel that my efforts have been rewarded	0.697				



Traveling with my parents makes me feel that my strengths are being put to good use	0.796		Traveling with my child makes me become more satisfied with my family life	0.684	
Traveling with my parents allows me to prove my abilities to them	0.791		I would like to show off our travel experiences to others after the trip	0.531	
<b>Family solidarity</b>	<b>0.837</b>	<b>5.649</b>	<b>Family solidarity</b>	<b>0.774</b>	<b>6.824</b>
Traveling with my parents makes me more tolerant of them	0.749		Traveling with my child makes it easier for me to express my opinions when making decisions	0.720	
Traveling with my parents makes it easier for me to express my opinions when making decisions	0.689		Traveling with my child makes me more tolerant of him/her	0.694	
Traveling with my parents helps me get to know my parents better	0.659		Traveling with my child helps me get to know him/her better	0.682	
Traveling with my parents makes me get along with them more harmoniously	0.613		Traveling with my child makes me get along with him/her more harmoniously	0.662	
Traveling with my parents makes me more willing to negotiate with them when I encounter problems	0.592		Traveling with my child makes me more willing to negotiate with him/her when I encounter problems	0.631	
<b>Enhanced knowledge</b>	<b>0.874</b>	<b>4.236</b>	<b>Enhanced knowledge</b>	<b>0.837</b>	<b>6.334</b>
Traveling with my parents helps me learn social skills	0.875		Traveling with my child helps me learn a lot about the use of new technologies	0.858	
Traveling with my parents helps me learn life lessons	0.860		Traveling with my child helps me improve my traditional views	0.814	
Traveling with my parents helps me learn new knowledge (e.g., local culture and customs)	0.800		Traveling with my child helps me gain wisdom (e.g., be open to new things)	0.748	
<b>Hedonic experience</b>	<b>0.858</b>	<b>3.738</b>	<b>Hedonic experience</b>	<b>0.721</b>	<b>4.758</b>
Traveling with my parents is unforgettable	0.800		Traveling with my child leaves good memories	0.782	
Traveling with my parents leaves good memories	0.766		Traveling with my child is enjoyable	0.688	
Traveling with my parents is enjoyable	0.731		Traveling with my child is unforgettable	0.646	
<b>Filial commitment</b>	<b>0.821</b>	<b>2.960</b>			
Traveling with my parents makes me realize that I should care more about my parents	0.777				

Traveling with my parents makes 0.747  
me realize that I should help my  
parents become exposed to more  
new things

Traveling with my parents makes 0.742  
me realize that I should spend more  
time with them

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Table 3. Results of the CFA

Adult-child scale				Parent scale			
Factors/Items	Factor loading	AVE	CR	Factors/Items	Factor loading	AVE	CR
<b>Psychological burden</b>		<b>0.598</b>	<b>0.899</b>	<b>Psychological burden</b>		<b>0.656</b>	<b>0.884</b>
I worry that I don't take good care of my parents while traveling	0.813			I can't do anything useful for my family during the tour	0.747		
I worry about encountering problems that I can't overcome while traveling	0.804			I feel like I have less control in my family during the tour	0.838		
Traveling with my parents makes it difficult for me to devote enough energy to tourist activities	0.745			I feel a reduced sense of self-worth during the tour	0.845		
Traveling with my parents requires me to put in more energy	0.778			I can't make decisions during the tour	0.807		
Traveling with my parents makes me feel psychologically stressed	0.728						
I feel mentally tired when my parents don't agree with me during the tour	0.770						
<b>Avoidance tendency</b>		<b>0.682</b>	<b>0.928</b>	<b>Avoidance tendency</b>		<b>0.642</b>	<b>0.915</b>
I have the idea of no longer traveling with my parents while traveling	0.840			I don't want to talk with my child during the tour	0.761		
I lose the desire to continue visiting with my parents during the tour	0.857			I give my child the silent treatment during the tour	0.852		
I give my parents the silent treatment during the tour	0.790			I have the idea of no longer traveling with my child while traveling	0.766		
I don't want to talk with my parents during the tour	0.825			I don't want to travel with my child for a while after the trip	0.843		
My interests in the attractions decrease during the tour	0.844			My interests in the attractions decrease during the tour	0.779		
I don't want to travel with my parents for a while after the trip	0.795			I lose the desire to continue visiting with my child during the tour	0.800		
<b>Spiritual fulfillment</b>		<b>0.598</b>	<b>0.856</b>	<b>Spiritual fulfillment</b>		<b>0.505</b>	<b>0.803</b>
Traveling with my parents enhances my sense of accomplishment	0.822			Traveling with my child makes me feel gratified by their growth	0.727		
Traveling with my parents makes me feel needed by them	0.772			Traveling with my child makes me feel that my efforts have been rewarded	0.739		
Traveling with my parents makes me feel that my strengths are being put to good use	0.755			Traveling with my child makes me become more satisfied with my family life	0.711		

Traveling with my parents allows me to prove my abilities to them	0.743			I would like to show off our travel experiences to others after the trip	0.663
<b>Family solidarity</b>	<b>0.621</b>	<b>0.891</b>	<b>Family solidarity</b>	<b>0.504</b>	<b>0.836</b>
Traveling with my parents makes me more tolerant of them	0.765			Traveling with my child makes it easier for me to express my opinions when making decisions	0.683
Traveling with my parents makes it easier for me to express my opinions when making decisions	0.806			Traveling with my child makes me more tolerant of him/her	0.706
Traveling with my parents helps me get to know my parents better	0.786			Traveling with my child helps me get to know him/her better	0.730
Traveling with my parents makes me get along with them more harmoniously	0.796			Traveling with my child makes me get along with him/her more harmoniously	0.701
Traveling with my parents makes me more willing to negotiate with them when I encounter problems	0.787			Traveling with my child makes me more willing to negotiate with him/her when I encounter problems	0.729
<b>Enhanced knowledge</b>	<b>0.637</b>	<b>0.840</b>	<b>Enhanced knowledge</b>	<b>0.564</b>	<b>0.795</b>
Traveling with my parents helps me learn social skills	0.769			Traveling with my child helps me learn about the use of new technologies	0.740
Traveling with my parents helps me learn life lessons	0.842			Traveling with my child helps me improve my traditional views	0.755
Traveling with my parents helps me learn new knowledge (e.g., local culture and customs)	0.782			Traveling with my child helps me gain wisdom (e.g., be open to new things)	0.757
<b>Hedonic experience</b>	<b>0.626</b>	<b>0.834</b>	<b>Hedonic experience</b>	<b>0.562</b>	<b>0.794</b>
Traveling with my parents is unforgettable	0.765			Traveling with my child leaves good memories	0.753
Traveling with my parents left good memories	0.818			Traveling with my child is enjoyable	0.766
Traveling with my parents is enjoyable	0.789			Traveling with my child is unforgettable	0.730
<b>Filial commitment</b>	<b>0.546</b>	<b>0.783</b>			
Traveling with my parents makes me realize that I should care more about my parents	0.785				
Traveling with my parents makes me realize that I should help my parents become exposed to more new things	0.698				
Traveling with my parents makes me realize that I should spend more time with them	0.731				

Table 4. The discriminant validity of the adult–child scale

	<i>HE</i>	<i>FS</i>	<i>FC</i>	<i>EK</i>	<i>SF</i>	<i>AT</i>	<i>PB</i>
Hedonic experience ( <i>HE</i> )	<b>0.791</b>						
Family solidarity ( <i>FS</i> )	0.644**	<b>0.788</b>					
Filial commitment ( <i>FC</i> )	0.555**	0.576**	<b>0.739</b>				
Enhanced knowledge ( <i>EK</i> )	0.425**	0.515**	0.420**	<b>0.798</b>			
Spiritual fulfillment ( <i>SF</i> )	0.487**	0.507**	0.505**	0.466**	<b>0.773</b>		
Avoidance tendency ( <i>AT</i> )	-0.563**	-0.540**	-0.376**	-0.261**	-0.330**	<b>0.826</b>	
Psychological burden ( <i>PB</i> )	-0.389**	-0.349**	-0.146**	-0.200**	-0.184**	0.577**	<b>0.773</b>

Note: \*\* indicates  $p < 0.01$ .

Table 5. The discriminant validity of the parent scale

	<i>HE</i>	<i>FS</i>	<i>EK</i>	<i>SF</i>	<i>AT</i>	<i>PB</i>
Hedonic experience ( <i>HE</i> )	<b>0.750</b>					
Family solidarity ( <i>FS</i> )	0.532**	<b>0.710</b>				
Enhanced knowledge ( <i>EK</i> )	0.348**	0.413**	<b>0.750</b>			
Spiritual fulfillment ( <i>SF</i> )	0.355**	0.257**	0.273**	<b>0.711</b>		
Avoidance tendency ( <i>AT</i> )	-0.332**	-0.336**	-0.017	-0.103	<b>0.804</b>	
Psychological burden ( <i>PB</i> )	-0.132*	-0.101	-0.015	-0.067	0.505**	<b>0.807</b>

Note: \*\* indicates  $p < 0.01$ , \* indicates  $p < 0.05$ .

Table 6. Mediating effect test results

Proposed relationships	Perspective of children			Perspective of parents			Mediating effect
	IE	TE	VAF	IE	TE	VAF	
Role clarity → overall experience evaluation		0.393			0.327		
Role clarity →value co-creation→ overall experience evaluation	0.218		55.47%	0.188		57.49%	Partially
Role clarity →value co-destruction→ overall experience	0.175		44.53%	0.138		42.20%	Partially
Prior knowledge → overall experience evaluation		0.258			0.290		
Prior knowledge →value co-creation→ overall experience	0.149		57.75%	0.220		75.86%	Partially
Prior knowledge →value co-destruction→ overall experience	0.108		41.86%	0.070		24.14%	Partially