Chinese outbound tourists' pro-environmental behaviors: Cultural perspective and the existing academic insights

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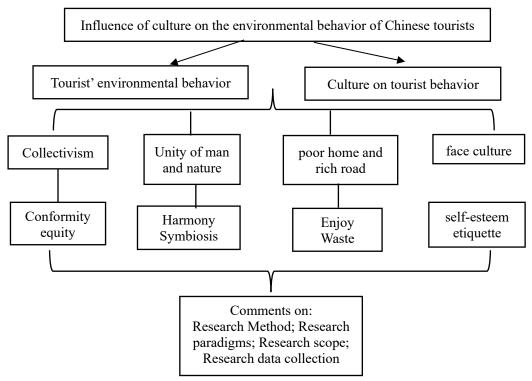
Abstract:

In the past ten years, China becoming the world's largest source of outbound tourists. The environmental behavior of Chinese outbound tourists has become a topic of in-depth research. This paper provides a conceptual framework for cultural research on the environmental behavior of Chinese outbound tourists through a systematic literature review. It found that the cultural factors that influence Chinese outbound tourists' environmental behavior include collectivist culture, "poor family rich road" culture, "harmony between man and nature" culture, and face culture. The discussion section presents five research scopes, paradigms, content, methodology, and data collection applied to cultural studies of tourists' environmental behavior. The conclusion proposes the research contribution and future direction of the study. This study makes an essential reference for policy-making in managing and guiding Chinese tourist behavior to promote the country's economic and environmental interests.

Keywords: culture, environmental behavior, Chinese outbound tourists, systematic literature review

In the past ten years, China's outbound market has continued to grow by more than 20%, becoming the world's largest source of outbound tourists and tourism consumption expenditures. The Chinese outbound tourism industry is developing rapidly at an unprecedented rate (Zhu et al., 2021). The rapid growth of Chinese outbound tourists has gradually become the focus of academic circles (Dai et al., 2017; King and Tang, 2009). The behavior of Chinese tourists has become a topic of in-depth research (Bao et al., 2018). Among them, the uncivilized behavior of Chinese tourists has caused headaches for people in many countries. The uncivilized behavior of many Chinese tourists in the past, such as loud noise, smoking everywhere, littering, food waste, etc., have caused headaches in many countries. However, it is obviously inappropriate to give up such a big "sweet pastry" cake of Chinese tourists. Therefore, how to better understand and guide the environmental behavior of Chinese tourists has become an urgent problem for many governments and scholars to solve.

Much research has long proven the positive effect of culture on individual behavior (He and Filimonau, 2020). It is not only effective in influencing consumer attitudes but also in driving subsequent behaviors (Craig and Douglas, 2006). As sociocultural values influence not only how people use natural resources, but also whether they are willing to act in a sustainable way (Park et al., 2007), culture may therefore play an important role in how societies deal with a wide range of environmental issues(Ringov and Zollo, 2007). However, despite its importance, our understanding of how culture influences pro-environmental behavior and culture is still limited (Chwialkowska et al., 2020; Gould et al., 2018; Leonidou and Leonidou, 2011; Soyez, 2012). Although the research on the influence of Chinese culture on tourist behavior has attracted many scholars' attention (Gao et al., 2017; Hsu and Huang, 2016b; Kwek and Lee, 2010b), its impact mechanism on Chinese tourists' environmental protection behavior needs to be deeply excavated and summarized (Qiu et al., 2018). Besides, many of them carry out empirical tests by imitating the value system of Western cultural background, without considering China's unique national conditions and culture (Qiu et al., 2018). Different from the cultural background of the West, the traditional Chinese cultural values take Confucianism as the main body and integrate Taoism, Buddhism and other schools of thought, emphasizing the unity of man and nature and the harmony of interpersonal relationships. We propose to analyze the impact relationship between Chinese culture and Chinese tourists' pro-environmental behavior from a theoretical perspective, as it will provide a more nuanced understanding of how culture affects Chinese tourists'



environmental behavior. From a management perspective, a better understanding of culture's role will help develop more targeted, country-specific international environmental strategies to promote sustainable pro-environmental behaviour.

Figure 1. the conceptual research framework of the study

This paper investigates the cultural reasons behind the environmental behavior of outbound tourists from China, which is a very interesting research content. The purpose of this paper is to understand further the overall research progress of the relationship between Chinese tourists' environmental protection behavior and culture in China by sorting out the existing research literature and development status and doing further research on these academic achievements. This paper summarizes and summarizes several deep-seated reasons that affect the environmental protection behavior of Chinese tourists from a cultural perspective, which has vital philosophical significance for analyzing and understanding the behavior of Chinese outbound tourists. This paper aims to synthesize research perspectives, methods, and content through a systematic review and thus establish a research framework (see Figure 1). The main findings section investigates four cultural themes related to the environmental behavior of Chinese outbound tourists: collectivism, poor home and rich road culture, harmony between man and nature, and face culture.

The discussion section then presents five discussions on the research scope, paradigm, content, methodology, and data collection applied to cultural studies of tourists' environmental behavior. The conclusion part proposes the research approach of tourists' environmental behavior.

2. Literature review

2.1 Tourists' environmental behavior (TEB)

Since the concept, dimensions, and influencing factors of tourists' environmental behavior were proposed, many people in the industry have paid attention to them, and a series of related studies have been carried out. Based on different disciplinary backgrounds and theoretical viewpoints, scholars define the behavior of individuals and groups that protect the ecological environment as environmentally responsible behavior (Blamey, 1998), environmental friendly behavior (Ratliff et al., 2017), sustainable behavior (McKenzie-Mohr, 2000), environment significantly behavior (Gatersleben et al., 2002), ecological behavior (Byrka et al., 2010), pro-environmental behavior (Kollmuss and Agyeman, 2002; Steg and Vlek, 2009), green behavior (Yang et al., 2015).

Researchers have conducted a series of classification studies and scale development based on different perspectives to deeply study tourists' environmental behaviors' main contents and manifestations. Sebasto and D'Costa (1995) divided pro-environmental behaviors into six dimensions, including educational and social behaviors, and were the first to develop an environmental behavior measurement scale for general groups. Stern et al. (1999) divided it into four levels of progressively decreasing radicalness, such as environmental activism and environmental citizenship behavior from the perspective of kinematics. In international tourism academia, Lee et al. (2013) innovatively developed the TEB scale by focusing on tourism's special group of tourists.

The drivers of TEB have long been the focus of mainstream research. The influencing factors of TEB are divided into personal factors and situational factors. Personal factors can be divided into demographic, psychosocial, and affective variables. Many researchers have found that demographic variables such as gender, age, income level, and educational background can affect an individual's PEB (Han et al., 2009; Pinto et al., 2011). Numerous empirical studies also support the positive effect of psychosocial variables (such as attitudes, responsibility, awareness of consequences, and norms) on individual PEB intentions (Bamberg and Schmidt, 2003; Kiatkawsin et al., 2020; Qiu, 2016). Many scholars believe that personal environmental behavior is a bounded rational decision, which will be affected by emotional factors. Many scholars have confirmed the expected emotion (Han et al., 2015; Onwezen et al., 2013) and place attachment(Cheng and Wu, 2015; Jiang et al., 2017) have an impact on the environmental behavior of tourists in the tourism context. Steg & Vlek (2009) identified four ways contextual factors influence an individual's decision-making process: First, the environment may directly influence behavior(Bamberg and Schmidt, 1999; Fujii et al., 2004). Second, social, psychological, and other factors, such as attitudes, emotions, and personal norms, may indirectly facilitate or hinder individual environmental behavioral choices (He et al., 2018; Su et al., 2020). Third, contextual factors can be used to moderate the relationship between social and psychological factors and environmental protection behaviors(Geller, 1995; Grimmer et al., 2016; Wang et al., 2019). Fourth, contextual factors may influence the strength of psychosocial factors.

2.2 Theoretical research on Chinese traditional culture and tourist behavior.

Many scholars have researched the relationship between Chinese culture and tourist behavior in tourism marketing, travel motivation, purchase and travel choices, and environmental behavior. Mok and DeFranco (2000) reviewed China's mainstream cultural values and their influence on tourism marketing in terms of tourism marketing. They proposed a cultural framework that included several attributes: authority, interdependence, and face. They pointed out that harmony is the key to China's most outstanding cultural value for tourists. In terms of tourists' travel motivation, Kwek and Lee (2010) analyzed the influence of Confucianism on Chinese tourists to Australia. They found that values such as harmony, authority, relationship building, and compliance can effectively explain the behavior of Chinese tourists(Kwek and Lee, 2010a). Hsu and Huang (2016) link Chinese values to travel behavior/preference and confirm Chinese culture's trend towards individualism/materialism (Hsu and Huang, 2016a). Gao et al. (2017) investigated the influence of "face" on Chinese outbound tourists' gift-buying behavior. She concluded that face reflects China's social psychological process, emphasizing the importance of social status and social status(Gao, 2017). Jiang et al. (2018) identified three cultural values that influence Chinese outbound leisure tourists' motivations: self-improvement, soul nurturing, and harmonious relationships (Jiang et al., 2018). Hsu and Huang (2016) explored Chinese cultural values prevalent in contemporary Chinese society and identified potential links between values such as "respect for history," "thrift," and "convenience" and travel

behavior. In terms of environmental protection, Mo (2014) studied the moderating effect of individual differences in the impact of traditional Confucian values on Chinese people's environmental protection behavior by creating a measurement system that reflects traditional Chinese Confucian values and personal responsibility (Mo, 2014). Rakov and Wang (2015) explored the influence of Chinese traditional cultural values on consumers' green product purchase behavior based on the relationship between Chinese consumers' dependent self-construction and their green product purchase behavior. Huang (2021) found that in China, Buddhism has the most significant influence on individuals' environmental protection behaviors, and it can influence environmental protection behaviors through its influence on individual values and environmental protection attitudes (Huang, 2021).

2.3 Theoretical Review

Scholars have used many theories to study the formative mechanism of proenvironmental behavior. Some important theories are as follows:

2.3.1 Value-Attitude-Behavior (VAB) Model

The value-attitude-behavior (VAB) model is a theoretical model first proposed by Homer and Kahle in 1988 to explain the relationship between personal values, attitudes, and behaviors. It is based on Schwartz's norm activation theory by Stern et al. (1999), integrating value theory and the new ecological paradigm theory, which is considered to be the best theory to study green consumption behavior. The VAB theory holds that the influence of values on specific behaviors can be moderated by attitudes toward behaviors, revealing that "in theory, influences should flow from abstract values to general attitudes toward specific behaviors" (Homer and Kahle, 1988, p. 638). That is, personal values can directly affect attitudes, which in turn can affect behavior.

2.3.2 Social capital theory

The theory of social capital originated in the 1970s. Scholars believe that social capital is "capital" that uses social relations as a carrier. Social capital is described as "the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or a social unit" (Nahapiet and Ghoshal, 1998). It is actually a kind of soft capital, which can promote the occurrence of social behavior, enhance the vitality of continuous behavior, maintain social harmony and stability and people's happy life (Xing, 2019). According to social capital theory, social interaction between individuals is a "resource of production" and there have some connections between individuals living in a particular society (Thomas & Gupta, 2021).

2.3.3 Social exchange theory

Social exchange theory is defined as "a general sociological theory concerned with understanding the exchange of resources between individuals and groups in an interaction situation" (Nahapiet and Ghoshal, 1998). It was first proposed by American sociologist Homans in 1958. The theory regards any social activity of people as an exchange, and all the people's actions are guided by explicit or non-obvious exchange activities that can lead to rewards or rewards. Emerson believes that social exchange involves at least two people, each of whom benefits the other and depends on the other's return (Li and Wu, 2020). This theory believes that when people choose to exchange objects, they will first estimate the possibility of certain activities' benefits, and there is the pursuit of benefits and the avoidance of risks. If the perceived benefit is greater than the perceived loss, people will continue to perform the behavior; if the perceived benefit is less than the perceived loss, the exchange behavior does not occur or does not persist even if it occurs (Xing, 2019).

2.4 Summary

Western paradigms derived from Western mainstream ideology, philosophy, and scientific research traditions have always dominated cultural value research. Due to the tremendous social and cultural differences between Western countries and China, it isn't easy to directly apply the results of Western research on tourists' environmental protection behavior to China. Theories developed in Western contexts need to be validated in Eastern cultural contexts (Schwartz and Bilsky, 1990). Although the existing literature has made some achievements in studying Chinese traditional culture and tourists' behavior, most of them focus on tourists' travel motivation, purchase behavior, travel choices, etc. There are few studies on tourists' environmental protection behavior, lack of research aimed at gaining an in-depth understanding of the characteristics of Chinese tourists and their possible relationship to Chinese cultural values(Kwek and Lee, 2010a). Therefore, from the perspective of Chinese traditional culture, there is a lot of room for exploration in studying the environmental protection behavior of Chinese tourists. In addition, some scholars pointed out that the integration of the cultural industry and tourism industry is complementary and has sharp contradictions(Li, 2015). Therefore, this paper summarizes the cultural reasons behind the environmental behavior of Chinese tourists through a literature review, which plays an important role in reducing the negative impact of Chinese tourists' cultural guidance and promoting the harmonious development of tourism and environmental protection

3. Research methods

To answer our research question, we first conducted a systematic literature review of the relationship between culture and pro-environmental behavior over the past 20 years. By treating the literature as qualitative data, systematic reviews improve the accuracy and reliability of our conclusions. A systematic literature review is a clear, repeatable,

and structured assessment of the existing literature related to one or more research questions in a particular field of knowledge (Tranfield et al., 2003). Systematic reviews can limit bias by applying detailed and reproducible scientific strategies (Cook, Greengold, Ellrodt, & Weingarten, 1997). It also can make a structured assessment of previous research to identify gaps and provide direction for future research (Tranfield et al., 2003). Our five-stage approach roughly follows the guidelines proposed by Wolfswinkel et al. (2013): (1) Criteria selection; (2) Literature search; (3) Selection and refinement; (4) Analysis; (5) Introduction. To ensure the high quality of research results, selection criteria included articles published in English in journals indexed by the Web of Science (WoS) and/or Scopus and articles in Chinese published on CNKI. Based on the careful screening of several publications on general topics, we identified the following keywords to help us find studies relevant to our research. The keywords are: (pro-environ* OR sustainab* OR green) behav* AND cul* AND outbound touri* AND Chin*, with a period of publications of the last 20 years, from 1991 to 2021. Our screening annotations must be complete papers that clearly state and describe Chinese culture and outbound tourists' environmental behavior as research topics and design strategies and explain the impact relations between the two. Eligible articles were analyzed for this review using a content analysis method. Content analysis was performed independently by two authors with experience in analyzing textual data using content analysis methods. Any discrepancies in the results analyzed by the two authors were resolved by discussion.

4. Research findings

Through systematic theoretical analysis, it is found that the four cultural elements that affect the environmental behavior of Chinese outbound tourists are collectivism, harmony between man and nature, "poor family rich road" culture, and face culture. These cultural elements exist independently but are also highly intertwined in a continuum. Therefore, understanding these cultural elements is an important reference for policy-making in managing and guiding Chinese tourist behavior to promote the country's economic and environmental interests.

4.1. Collective Culture:

Collective culture refers to "a tightly-knit framework in society in which individuals can expect their relatives or members of a particular ingroup to look after them in exchange for unquestioning loyalty" (Hofstede Insights, 2017a, pp.1). A vital core idea in Chinese traditional culture is "putting the collective interests first" (Spreitzer and Sutcliffe, 2007), even giving up self-interest for the collective good. This highly collectivistic culture strongly encourages group harmony and strong group influence (Hofstede, 2001). Therefore, group norms in Chinese culture implicitly exert enormous pressure on its members to require group conformity and group coherence. Group members experience high group stress even in their day-to-day activities. As a result, the Chinese are more likely to use the behavior of their significant others as a reference

for their behavior than those in a culture that does not value groups very much. Liu et al.(2021) found that collective culture influences Chinese tourists to abandon their normal habits during travel, prioritizing pleasure and acquisition motives while on vacation, resulting in more food waste during the journey (Liu et al., 2021). Daryanto and Song (2021) found that the effect of place attachment on environmental behavior was more potent in collectivist countries (such as China) than in individualist countries (such as the United States). Teng et al. (2021) found that the influence of relatives and friends influenced by Chinese collective culture is a key factor in promoting Chinese tourists to take Ethical Tourism Behaviors to conduct ethical tourism and protect the local tourism environment. Wang and Zhang (2020) mainly explore the relationship between social norms and tourists' environmental protection behaviors based on collective thought-based Chinese traditional forces. They find that traditionality in China mediates the mediating relationship between injunctive norms and proenvironmental behaviors through personal norms, rather than the mediating relationship between descriptive norms and pro-environmental behaviors.

Another manifestation of collectivism is herd mentality. Herd mentality is mainly derived from Asch's experimental result(Asch, 1951). Influenced by the behavior of outsiders, individuals will change their original perceptions, judgments and understandings, so that they behave in a way that is in line with public opinion or the majority of people(Asch, 1951). Conformity psychology is one of the eight essential elements in China's value orientation, and conformity identification orientation is manifested in identifying conformity behavior and the majority reference tendency(Jin, 2005). Some scholars believe that conformity is one of the reasons for the uncivilized behavior of Chinese tourists. According to interviews with Chinese tourists, during the travel process, most of them will follow the trend of "if everyone throws garbage into the trash can, I will not throw garbage at will"(Hu, 2014). This is because herd mentality strongly influences Chinese tourists' consumption behavior, and they will follow or imitate the environmental behavior of people around them (Yao and Kang, 2021).

Another aspect of herd mentality that can positively discover herd mentality is the idea of equalizing the poor and the few. The idea of equalizing poverty and widowhood mainly comes from Confucius' taxation thought, "Don't worry about the few but worry about the inequality", the original meaning is the meaning of fair distribution. But later, it was translated literally by people, and it was understood as a big pot idea. It means that it doesn't matter if you get less, but you are afraid that others will get more than you; or can be understood as uneven distribution, resulting in people's psychological imbalance. Through interviews, Liao and He (2018) found that tourists feel unfair in their tourism consumption, and tourists sometimes use self-interested methods to reduce the deprivation of their interests. Yao and Kang (2021) also confirmed that some Chinese tourists would take more food when they enjoy the buffet out of fear of losing money, resulting in severe food waste.

4.2. The idea of unity between man and nature

The unity of man and nature is a traditional Chinese culture that provides foundational values with far-reaching influence and a long history(Zhang et al., 2020). It is also a Chinese traditional culture that is different from other countries (Wang et al., 2017). The unity of nature and man, nature refers to the natural environment, and man refers to human beings, representing that nature and human beings are closely related. Human beings should conform to the times, respect nature, attach importance to ecological balance, and live in harmony with all things in nature (Song, 2017). Hence, the cultural philosophy of the unity of man and nature is ecologically centered, as they believe that man is an inseparable part of nature (Zhang, 1982). Chinese people have traditionally attached great importance to living in harmony with nature (Chan, 2001). But their worldviews are often described as anthropocentric or instrumental (the environment exists for the benefit of humans) and anthropomorphic (animals, plants, and natural features are given human characteristics (Sofield, 2007). Guided by the idea of "harmony between man and nature", Chinese culture advocates the concept of "sustainable" development, emphasizes the timely and appropriate use of natural resources, and opposes the abuse of resources (Mo, 2016). Zhang et al. (2020) took proenvironmental destination image and Confucian culture to explore the formation mechanism of pro-environmental behavior. They found that Confucian culture, based on the unity of nature and man, had a positive U-shaped moderating effect on the relationship between pro-environmental destination image and pro-environmental behavior.(Zhang et al., 2020). Gao et al. (2018) believed that the overall values and beliefs of Chinese traditional culture, especially the Confucian thought of the unity of nature and man, have an important impact on Chinese tourists' views of nature (Gao et al., 2018). Pan Ailing et al. (2021) found that the more heavily polluting companies are influenced by the Confucian thought of "harmony between man and nature", the more inclined they are to conduct green corporate mergers and acquisitions. Pan et al. (2021) found that the more heavily polluting companies are influenced by the Confucian thought of "harmony between man and nature", the more inclined they are to conduct green corporate mergers and acquisitions(Pan et al., 2021). Mo (2019) compared the cultural background of Chinese and Western rock climbing tourists to the traditional and environmentally friendly climbing concepts. He found that China's "harmony between man and nature" has an important influence on Chinese tourists' choice of green and environmentally friendly rock climbing activities (Mo, 2016). Wang (2015) found through research that in the context of traditional Chinese culture, the value of the unity of nature and man has an indirect effect on carbon emission reduction behavior(Wang, 2015). Wang (2013) concluded through empirical analysis that the harmonious Taoist thought of the unity of nature and man has a positive impact on green purchasing behavior(Wang, 2013). Tang (2017) conducted a survey on the environmental behavior of 258 Chinese tourists in scenic spots and found that the values of the unity of nature and man have a significant positive impact on tourists' environmental responsibility behavior (M. Tang, 2021). At the same time, environmental emotion plays a partial mediating role between values and tourists' environmental

behavior.

4.3. "poor family rich road" culture

The "poor family rich road" in China means that no matter how difficult the family is, the more generous you should be on the way and the more you need to spend. Therefore, Chinese people always need to bring a little more money and enough money to travel. According to the "Travel Consumption Data Report" released by Ali Travel, the average spending of Chinese consumers on travel in one year is much higher than the monthly income of Chinese residents, and half of them will exceed their budgets when traveling and shopping. Some scholars have pointed out that Chinese tourists are more tolerant and flexible in cognition and thinking in the tourism environment, which may increase some uncivilized or unethical purchasing behaviors (Liao and He, 2018).

Through interviews and grounded analysis, Yao (2017) found that "poor family rich road " is a paradox in Chinese traditional culture, profoundly impacting Chinese tourists. It means that tourists will follow the principle of thrift in their daily life and even in the process of travel, while they are more comfortable when they go out(Yao and Kang, 2021). In food waste research, Liu et al. (2021) also found that Chinese tourists are influenced by the "poor family rich road" culture, unlike Slovenian tourists, abandoning their normality during the travel. They would prioritize hedonic and acquisition motives while on vacation, leading to more food waste on the journey (Liu et al., 2021). Liao and He (2018) found that Chinese tourists' behavior of desperately consuming food from buffets and resulting in a lot of waste is influenced by the hedonic culture of "the poor family rich road". Huang (2017) found that by studying the influencing factors of Chinese tourists' purchasing behavior, tourists change their daily habits and responsibilities by traveling abroad. Changes in this situation will make people feel indifferent, ashamed and vigilant, resulting in impulsive consumption and wasteful behavior(Huang, 2017). Through interviews with 30 Chinese tourists, Huang et al. (2013) found that 36% of the respondents believed that leisure appeal directly affects low-carbon tourism life behavior. The 47% of respondents believed that leisure appeal could affect low-carbon tourism life behavior (Huang et al., 2012). Through empirical analysis, Yao and Kang (2021) found that hedonistic comfort needs have the most substantial influence on Chinese tourists' environmental protection behavior. They believe that Chinese tourists will comply with the needs of comfort during the tour of the scenic spot and may make unenvironmental behaviors (Yao and Kang, 2021). Under the influence of the culture of "the poor family get rich road," Chinese tourists will reduce the perception tendency and price sensitivity of tourist souvenir price information during the travel process, thus resulting in excessive consumption and wasteful behavior(Li et al., 2020). Besides, Chinese tourists who value enjoyment are more likely not to engage in environmental behaviors(Ren, 2018).

4.4. Face Culture

The face is 'the social anchoring of self in the gaze of others' (Qi, 2011, p.280) and focuses on intergroup behaviour based on perceptions and interactions with others (Ho, 1976). It is commonly recognized as one of the most salient social characteristics of being Chinese (Lin, 1976). Unlike the "independent self" in the Western concept of face, the face in China represents the "relational self". Individuals will have different cognitions and definitions according to their relationship with the interacting objects. An individual's sense of face is deliberately becoming a favorable public image in the minds of others under the social interaction (Huang, 2002). Generally speaking, individuals with high face awareness will try their best to gain or maintain face. For example, in terms of consumer behavior, consumers with high face-consciousness tend to buy luxury goods with scarcity characteristics (Balderjahn, 1988) to reflect their social status and achieve the goal of self-realization (Schultz et al., 1995). Face awareness would enhance the status consumption tendency of consumers and then constitute conspicuous consumption behavior (Yuan, 2008).

There is a close relationship between face awareness and pro-environmental behavior. People who implement pro-environmental behaviors can reflect their environmental literacy and project a good image to society and others. Therefore, people with high face awareness are more willing to implement pro-environmental behaviors to gain respect from others. Through semi-structured in-depth interviews, it is found that overseas Chinese tourists adopt civilized environmental behaviors out of fear of losing face (Zhang et al., 2019). Wan and Poon (2014) studied the impact of Chinese tourists' face awareness on their green consumption. A questionnaire survey of Chinese tourists found that face awareness can regulate tourists' choice of green hotel brands. The higher the face awareness, the higher the green consumption. Chinese tourists are more inclined to choose green hotels for their stay and consumption (Wan and Poon, 2014). Zhang and Bai (2015) found that Chinese tourists' perceived face threat played an adequate mediating role in the relationship between protective face need and moral behavior intention(Zhang and Bai, 2015). Wang et al. (2018) found that Chinese farmhouse hosts use the concept of face to persuade urban tourists' environmental behaviors in social interactions. The host will publicly praise tourists with environmentally friendly behaviors and save face for those with unfriendly behaviors to encourage them to improve their environmental behaviors (Wang et al., 2018). In addition, some scholars have explored from other perspectives of Chinese culture. The results of Wang and Ju (2021) show that face awareness directly impacts environmental behavior in the public sphere and indirectly affects it through different dimensions of environmental cognition (Wang and Zhao, 2021).

5. Discussion

This paper builds a conceptual framework for analyzing Chinese culture's impact on the environmental behavior of Chinese outbound tourists by synthesizing the existing literature on environmental behavior. We can interpret this framework from a top-down perspective through a systematic view to explore and examine existing strengths and weaknesses. It can be emphasized that the current research on this topic mainly has the following advantages and disadvantages, which can be summarized as follows:

First, as far as research methods are concerned, qualitative research methods are the primary method employed by researchers. Most scholars use qualitative interviews to conduct empirical research on outbound Chinese tourists(Li and Wang, 2020). Interview questions are generally semi-structured or open-ended to help better respondents express their thoughts clearly. Some scholars use UGC analysis techniques (Jia, 2020), participant observation (Ma et al., 2021), and other qualitative methods to examine further the environmental protection behavior of overseas Chinese tourists. Although some scholars like Wang and Zhao (2021) use the quantitative questionnaire survey method in their research, they are all based on a self-report questionnaire. There is a certain deviation between real behavior data and self-report questionnaire data, leaving a lot of room for improvement in the authenticity of the measurement results. In addition, the existing research is mainly based on static time horizontal surveys, and there is a lack of long-term longitudinal tracking surveys on the same group of tourists. Therefore, it is necessary for future research to combine quantitative and qualitative research methods on the basis of existing conventional research methods, and comprehensively use research methods such as experimental methods, longitudinal investigations, and qualitative analysis. This has long-term significance for improving the quality of cultural research results of outbound Chinese tourists' environmental protection behavior.

Secondly, there are more empirical studies and fewer theoretical studies in research paradigms. The cultural research on Chinese tourists' environmental protection behavior is based on practical and comparative analysis. Few studies are exploring the influence of Chinese culture from a theoretical perspective. Although some scholars have partially combined Chinese culture and behavior theory, most theories focus on stimulus—response theory(Lai et al., 2021), goal framing((Liu et al., 2021), value-attitude-behaviors (VAB) framework(Ren, 2018) and the planned behavior theory (Teng et al., 2021), the theory involved is relatively simple and not deep enough. Thus, future research can further study the role of culture in forming environmental behaviors from the perspective of more behavioral theories, such as expectation theory, broken window theory, social capital theory, and NAM theory. In the transnational era, the theoretical study of cultural influence on environmental behavior can also be linked to the theoretical discourse of transnationalism and globalization for further theoretical and philosophical discussions.

Third, in terms of research content, mainstream academic research mainly focuses on the cultural impact of outbound tourists' general environmental protection behavior but rarely discusses China's specific cultural attributes and different types of environmental protection behaviors. Many authors equate Chinese culture with Confucian culture, which narrows the connotation of Chinese culture and makes Chinese culture one-sided. Chinese culture is a comprehensive culture influenced by Confucianism, Taoism, Buddhism, and 56 ethnic groups and regional cultures. Therefore, future research also needs to divide the cultural study of Chinese tourists' environmental protection behavior into different nationalities, regions, and intergenerational cultures in China to understand the diversity of Chinese culture. In addition, future research should focus more on the future development patterns and scenarios of using cultural means to manage and guide Chinese tourists' environmental protection behavior.

Fourth, in terms of research data, the amount of data available for cultural research is limited, but the sources are relatively wide. The secondary documentary evidence could be from written diaries, Internet blogs, media, videos, guides, photographs, books, and journal articles. These data collection methods combine various methods, including interviews, participatory observation, ethnography, and blog content surveys. With the continuous development of network technology, there may be more data channels available for research and use in the future.

Furthermore, COVID-19 has profoundly reshaped the world travel landscape in recent years. Almost all forms of human movement have been disrupted due to the closure of territorial borders and a halt to cross-border travel (The United Nations, 2020). Research on the environmental behavior of Chinese outbound tourists is by no means a bystander who shies away from the far-reaching effects of this changing global phenomenon. Shortly, the recovery and resilience of the world tourism industry under the influence of COVID-19 is still evident (Sharma et al., 2021). Therefore, the topic of environmental restoration and resilience in outbound tourism can be further studied separately in other settings.

6. Conclusion remarks

This paper synthesizes the existing mainstream research methods of cultural studies of Chinese outbound tourists' environmental protection behavior. It synthesizes an integrated conceptual framework to construct a systematic perspective on topics such as Chinese outbound tourist research, environmental protection behavior, and cultural impact. Specifically, the discussion section summarizes in detail the cultural factors that influence the environmental behavior of Chinese outbound tourists, including collectivist culture, "poor family rich road" culture, "harmony between man and nature" culture, and face culture. It reveals the complex cultural reason of Chinese outbound tourists' environmental behavior. While considering these concepts, a detailed discussion of the contributions and implications of this paper continues below.

It is of great academic and practical value to study the cultural driving factors of Chinese outbound tourists. In terms of academic value, this study effectively improves the theoretical research on Chinese outbound tourists' environmental protection behavior from the perspective of Chinese culture, and can enrich the content of empirical research on tourists' environmental protection behavior. It can promote the intersection of tourism, philosophy, psychology, social management and other disciplines, make up for the deficiencies of the existing research theories on environmental behavior in terms of cultural impact, and effectively expand the research field of tourism culture and sustainable tourism development. In terms of application value, studying the impact of Chinese culture on the environmental protection behavior of Chinese outbound tourists can provide a strong theoretical basis for national governments and scenic spot managers to formulate environmental protection management strategies for Chinese tourists and evaluate management effects. This will contribute to the construction and promotion of policies for cultivating environmental behaviors of Chinese culture-driven tourists and provide scientific support and paradigms for developing a sustainable green tourism industry in the world under the background of "cultural tourism integration".

This study broadens the research perspective of the cultural drivers of Chinese tourists. Most of the existing studies on Chinese culture and tourist behavior focus on tourists' travel motivation, purchase behavior, travel choices, etc., and there are few studies on tourists' environmental behavior. The research is mainly based on qualitative analysis, and there are more phenomenon descriptions and less mechanism research. By systematically sorting out and analyzing the ecological and environmental protection concepts of Chinese culture, this research deeply explores the influence of Chinese cultural values on the environmental protection behavior of Chinese outbound tourists from the four perspectives of collectivism, "poor family rich road" culture, "harmony between man and nature" culture, and the face culture. It is a relatively new research perspective, further enriching the theoretical research on tourists' environmental protection behavior.

The global movement of people has come to a standstill due to the impact of COVID-19. With the availability of vaccines and the recovery and further development of the global economy, global population movements are destined to resume and further accelerate. China has a relatively good degree of epidemic control and recovery. Therefore, after the epidemic, Chinese tourists are bound to become the main force of international tourism as before. Although the epidemic may bring many challenges to the research, more tourism culture researchers and environmental protection personnel need to pay attention and cooperate in the future research process. Under the huge wave of globalization, people's cross-border flow will accelerate, and the international relationship network between China and other tourist destination countries will be further reconstructed in space. More effective international cooperation is needed to conduct cross-cultural research on environmental behavior of Chinese tourists. In addition, it calls for more academic attention from tourism and cultural researchers and market practitioners.

7. Reference

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