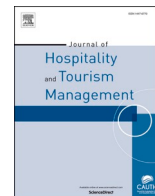




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# How does rural tourism experience affect green consumption in terms of memorable rural-based tourism experiences, connectedness to nature and environmental awareness?

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## ABSTRACT

This paper investigates the relationship between rural tourism experience and tourists' post-experience green consumption intention. This study is conducted with 345 respondents who have been to a rural destination for tourism purposes within the last five years. Results, employing Stimulus-Organism-Response (S-O-R) model, show that the dimensions of rural tourism experience (i.e. education, esthetic, entertainment, and escapism) positively affect memorable rural-based tourism experiences which also have a positive and significant influence on connectedness to nature. Connectedness to nature and environmental awareness both have statistically significant influences on tourists' green consumption intentions later in life. The results indicate that better rural tourism experience can increase motivation for green consumption. Meanwhile, the results demonstrated the importance of memorable rural-based tourism experiences, connectedness to nature, and environmental awareness, which have been found to play full mediating roles in the lasting relation between rural tourism experience and green consumption.

## 1. Introduction

Rural tourism has been recognized as a carrying force and an important tool for the development of rural areas in many countries (Su, 2011; Su et al., 2019; Yu et al., 2019). In Europe, rural tourism has long been regarded as an effective means of overcoming the social and economic challenges confronting rural areas associated with the depression of traditional agrarian industries over a hundred years (Su, 2011). In China, the biggest agrarian society by population in the world, rural tourism has also been widely encouraged to revive the rural economy and promote rural reconstruction during the latest decades (Yu et al., 2019). Especially, after the outbreak of COVID-19, tourists prefer less crowded and nature-oriented destinations (Marques Santos et al., 2020). Rural tourism has become Chinese tourists' first choice to travel for leisure to fulfill their travel desire during the period of COVID-19 (Zhu & Deng, 2020). Rural tourism is any form of tourism that showcases the rural life, art, culture and heritage at rural areas, thus benefiting the local economy and society, as well as enriching tourism experience

through the interaction between the tourists and the locals (Nagaraju & Chandrashekar, 2014; Pesonen & Komppula, 2010). Rural areas typically have low population densities and the natural and/or the farm-ed/forested environment predominating over the built environment, which encompasses areas with forest, agriculture, woodland, as well as wild uncultivated tracts in a natural or semi-natural state (Best & Rogers, 1973). Frequently, tourists refer to the rural tourism experience as positively way to conquer the stress and negative conditions of daily urban life (Kastenholz et al., 2012).

Unsustainable modes of global consumption cause severe environmental issues, such as water, air, and land pollution, global warming, and waste generation (Brizga et al., 2014). Green consumption is the voluntary practice of engaging in environmentally-friendly consumer practices, which is an essential way to relieve the world pressure from environmental issues (Connolly & Prothero, 2008). Green consumption has become a major concern for governments, businesses, and consumers in recent years (Ge et al., 2020). Many serious environmental deterioration behaviors, as is recognized, are rooted in tourist

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development and activities (Trang et al., 2019; Wang et al., 2020). The concern of green consumption has become more critical than ever in contemporary tourism (Kiatkawsin & Han, 2017; Wang et al., 2020). As the promotion of rural tourism currently, it is worthwhile to consider the effects of rural tourism experience on tourists' green consumption intentions.

In practice, many problems occurring in the process of developing rural tourism are related to the sustainable issues (Cunha et al., 2020). From a holistic view, the travel experiences can be classified into three types: pre-experience, on-site experience and post-experience, according to the bonds formed between people and destination before, during or after their visits (Leiper, 1979; Li et al., 2019; Tynan & McKechnie, 2009). The majority of prior research have examined rural tourism and environmental sustainability from pre-experience or on-site experience perspectives, such as the motivation for maintaining landscapes to attract tourists, experience in the rural idyll, etc (e.g. Kline et al., 2014; Lane, 2009; Sharpley & Jepson, 2011). For example, as to the pre-experience, Currie and Falconer (2014) examine how transportation infrastructure and accessibility contribute to the sustainability of rural tourism. Some research (Leanza et al., 2016; Porto et al., 2011; Radosavljević & Culafić, 2019) have developed strategies for preserving and promoting the traditional rural buildings, agricultural land and cultural heritage in rural areas to attract tourists. The research on green behavior at the rural destination is typically referred to on-site experience (e.g. Addinsall et al., 2017; Chin et al., 2018; Moore et al., 2018; Tang et al., 2022). Wang et al. (2018) reported that hosts at rural Chinese B&Bs are encouraged to advise tourists on sustainable conducts by both concrete and intangible environmental benefits. Rao et al. (2022) reveal how destination image affects the tourists' pro-environmental behavior during their rural tourism, such as joining in this rural destination's cleanup efforts to protect local environment. The post-experience refers to experiences that will influence tourists' decision on what to do after the visit (Hwang et al., 2018). The research carried out on rural tourism and environmental sustainability from a post-experience perspective are mainly focused on how the perception of the destination in rural context or rural tourism experience on the revisit intentions or intentions to recommend (e.g. Guizzardi et al., 2022; Loureiro, 2014). However, few studies have explore the lasting relation between rural tourism and tourists' green consumption intentions, particularly in terms of the dimensions of education, esthetic, entertainment, and escapism from an experience economy perspective. Some scholars investigate the link between experience in nature and tourists' post-experience pro-environmental behaviors (e.g. Collado & Corraliza, 2015; Cooper et al., 2015; Crawford et al., 2017; Pensini et al., 2016). Experience in nature refers to the experience that an individual engages with nature (Bratman et al., 2019; Chawla & Derr, 2012), such as walking, playing or hiking in natural areas. For example, Higham and Carr (2002) examine ecotourism experiences of visitors in Aotearoa/New Zealand, with a primary focus on experiencing natural areas, and show that experiences at ecotourism sites may be an effective mediator in influencing visitors' environmental values and post-visit behaviors. Wells and Lekies (2006) indicate that nature exposure, i.e. the amount of physical contact with nature, contributes to individuals' ecological attitudes and ecological behavior later in life. Rosa et al. (2018) find that pleasant experiences in direct contact with nature during childhood have a long-term influence on adults' pro-environmentalism. Rural tourism, rather than experience in nature, represents any form of tourism that showcases the rural life, art, culture and heritage at rural areas, and thus can include complex multi-faceted activities, such as farm agricultural tourism, educational travel, cultural tourism, food and wine, small village/town touring, theme festivals, arts and heritage tourism, etc (Clemenson & Lane, 1997; Lane, 2009). The research on the impacts of rural tourism experience on post-experience green consumption of tourists is more scarce, justifying more in-depth research. Therefore, the paper aims to propose measures to fill the gap. The research questions are proposed as follows: (1) will rural tourism experience affect tourists' green consumption in

post-experience? (2) If so, via what mechanism? (3) What are the specific effects of rural tourism experience dimensions on green consumption?

To examine the intentions of green consumption, the widely used research model is Fishbein and Ajzen's (1975) theory of reasoned action, as well as the theory of planned behavior (TPB), which focuses on cognitive factors, but ignores the impacts of emotional factors on behavioral intentions (Conner & Armitage, 1998). Individual decision-making, however, is a complicated process incorporating a number of aspects connected to societal influences, personal emotions and other psychological traits. The Stimulus-Organism-Response (S-O-R) model can aid in clarifying the relationship between a stimulus (S) perceived by a tourist, the accompanying emotions (O), and their subsequent responses (R) (Robert & John, 1982). In this paper, we utilize the S-O-R model to explore the links between rural tourism experience and tourists' green consumption. Rural tourism is an activity that can create memories and simultaneously cause new impressive experiences (Rajaratnam et al., 2015; Zatori et al., 2018). Those experiences that are selectively constructed from tourists' experiences and can be remembered after a trip, i.e. memorable tourism experiences, might influence their behavioral intentions (Wei et al., 2019; Zhang et al., 2018). Moreover, connectedness to nature acts as a mediator between adults' positive experiences in nature and pro-environmental behavior (Rosa et al., 2018), whereas connectedness to nature and environmental awareness are the relevant antecedents to pro-environmental behavior intentions (Frantz & Mayer, 2014; Testa et al., 2021). Thus, we propose that rural tourism experience (stimuli) can elicit tourists' memorable rural-based tourism experiences and then form connectedness to nature, and environmental awareness (organism), which stimulates their green consumption (response).

The current study extends previous research in three ways. Firstly, this study is a novel contribution to the literature of green consumption in the rural tourism context since it focuses on rural tourism experience and its resulting post-experience green consumption intention by S-O-R model. Furthermore, the study explores the mechanism of how rural tourism experience positively affects tourists' green consumption. The contribution of rural tourism experience to the formation of tourists' green consumption intentions is proved to be indirect, which provides evidence for the importance of the mediators - memorable rural-based tourism experiences, connectedness to nature and environmental awareness. Lastly, the dimensions - esthetics and education, are confirmed to be more active and important on the construction of green consumption, compared with other dimensions of rural tourism experience.

## 2. Literature review and hypotheses development

### 2.1. Stimulus-organism-response (S-O-R) model

Mehrabian and Russell (1974) firstly proposed Stimulus-Organism-Response (S-O-R) model, which suggests that outside inputs, i.e. the social and physical environment (Stimulus) can affect individuals' prompt internal emotional states (Organism), resulting in a series of behavioral reactions (Response) (Robert & John, 1982; Bagozzi, 1986). In recent years, scholars in marketing and tourism management, have used the S-O-R model to uncover the role of emotional experience in the formation of tourism consumption behavior in various tourism areas (Chen et al., 2020; Chen, King, & Suntikul, 2019; Zhang et al., 2021). Furthermore, environmental responsibility has been accepted as consumer emotional state variables in the S-O-R model by many scholars (Chang, 2017; Omoto and Packard, 2016). For example, based on S-O-R model, Su et al. (2017) study the link between perceived corporate social responsibility and green consumer behavior using the evaluation variables of emotion and customer-company identification. Hu, Xiong, Lv, & Pu (2021) demonstrate the relationship between residents' environmental responsibility and tourists' green consumption by the S-O-R

model.

Therefore, the current study firstly utilizes the S-O-R model to explain the relations between tourists' rural tourism experience and the formation of their green consumption behavior after visit. When tourists are placed in rural environment (Stimulus), they might form the memorable rural-based tourism experience, and build the internal states of connectedness to nature and environmental awareness (Organism), which push them into engaging in green consumption (Response).

## 2.2. Stimulus: rural tourism experience

In contrast to urban areas, the strong appeal of rural tourism, includes nature, small scale, open space, outdoor activities, relaxing in a healthy and natural environment, and authentic and distinct experiences from the urban way of life (Cawley & Gillmor, 2008; Kastenholz et al., 2012; Lane, 2009; Lane, 2009). Most researchers study rural tourism and environmental sustainability from the perspectives of pre-experience or on-site experience (e.g. Addinsall et al., 2017; Chen et al., 2018; Chin et al., 2018; Frochot, 2005; Garau, 2015; Leco et al., 2013; Moore et al., 2018; Rodrigues et al., 2015; Villanueva-Álvarez, Mondéjar-Jiménez, & Sáez-Martínez, 2017). For example, from a pre-experience perspective, strong evidences are revealed for the primary motivation for rural tourism to be close to nature, either for genuine, spiritual experiences, or for relaxation, recreation and sports activities (Kline et al., 2014; Rodrigues et al., 2012; Sharples & Jepson, 2011). The reasons and benefits are also identified by some other research as exploring a romantic experience of the rural idyll, including a rural way of life and the culture (Butler & Hall, 1998; Figueiredo, 2009; McCarthy, 2008). As to the research on on-site experience (e.g. Addinsall et al., 2017; Chin et al., 2018; Moore et al., 2018; Tang et al., 2022; Wang et al., 2018), Chin et al. (2018) show that the constructs of green marketing tools are significantly and positively associated with rural tourists' green purchasing behavior in the rural destinations. Tang et al. (2022) identify the differences in green consumption intentions of tourists when they are involved in urban and rural destinations. From a holistic perspective (Leiper, 1979), the tourist experience may be separated into three stages: pre-experience, on-site experience, and post-experience (Tynan & McKechnie, 2009). The research carried out on rural tourism and environmental sustainability from post-experience are mainly focused on how the perception of the destination in rural context or rural tourism experience on the revisit intentions or intentions to recommend (e.g. Guizzardi et al., 2022; Loureiro, 2014). However, few studies have examined the effect of relationship of rural tourism on tourists' post-experience green consumption intentions.

Pine and Gilmore (1998) firstly present the four dimensions of the rural tourism experience, i.e. education, entertainment, esthetics, and escapism, which have been used in many tourism studies (Hosany & Witham, 2010; Loureiro, 2014; Mehmetoglu & Engen, 2011). In the words of Pine and Gilmore (1998), educational experiences represent active participation in activities and bringing the experience into the mind to occupy an individual's attention. Examples are participating in theme fairs or performing agricultural activities and/or learning how to make handicrafts. Entertainment occurs when the tourists observe the others' activities passively. Esthetics means that the rural tourists enjoy the stimuli from the environment, such as the contemplation of the rural landscape by the five senses. Escapism represents that the rural tourists forget about their daily lives and embrace the rural way of life. Rural tourists, for instance, may have different routines, diets and different wake or sleep schedules. Following the framework of Pine and Gilmore's (1998), Oh et al. (2007) develop a scale to assess the experiences of bed and breakfast (B&B) accommodation. The scale developed by Oh et al. (2007) is also adopted by some researchers to assess the four experience dimensions, in various tourism contexts, e.g. museums, theme parks, wine tourism, cruise trips, cultural or music events, or temple stays (Mehmetoglu & Engen, 2011; Park et al., 2010; Quadri-Felitti & Fiore, 2013; Song et al., 2015). Su et al. (2016) find significant influence of all

above four dimensions on positive arousal or pleasure for nature-based tourism experiences. Kastenholz, Davis, and Paul (1999) examine the impacts of dimensions of rural tourism experience and reveal that the rural tourism experience dimensions of education and esthetics positively predict rural tourists' arousal, whereas escapism and esthetics determine memorability.

Of the existing literature, little attention has been paid on empirically examining the relations between the four dimensions of rural tourism experience and tourists' post-experience consumption intentions that might be influenced by those experiences constructed and remembered after their trips (Wei et al., 2019). As the emerging of rural tourism, it is essential to recognize that tourists' environmental behavioral intentions after their visit not only express the concerns for the environment, but also give the reasons for promoting rural tourism.

## 2.3. Organisms: memorable rural-based tourism experiences, connectedness to nature, and environmental awareness

### 2.3.1. Memorable rural-based tourism experiences

As Sthapit and Björk (2017), the term - memorable refers to unforgettable or extraordinary things. It is vital to highlight that "memory" is a broader word than "memorable" (Schultz, 2001). That is memory is connected with the commonplace or banal (Schultz, 2001), but something memorable is referred to something impressive and delightful that people would remember in the future (Zhong et al., 2017). Thus, according to Zhang et al. (2018), memorable tourism experiences (MTEs) are those experiences that are selectively constructed from tourist experiences and can be remembered and recalled after a trip.

Previous MTEs research have discussed the components of MTEs (Kim, Ritchie, & McCormick, 2012; Tung & Ritchie, 2011). Kim, Hallab, and Kim (2012) construct and validate a seven-dimensional scale in a cross-cultural study for the measurement of MTEs. The dimensions are hedonism, refreshment, local culture, meaningfulness, knowledge, novelty, and involvement, which are also used in this paper. Hedonism perceived by a tourist, is the dimension reflecting the emotional value of their tourism experience (Tung & Ritchie, 2011). Duman and Mattila (2005) indicate that strong emotions accompanied with an experience can be remembered. The refreshment dimension refers to the renewal component of the travel experience. The relaxation and time away from the routine and obligations during traveling can affect tourists' memorability of their experiences (Morgan & Xu, 2009). Novelty, as the key motivator, is another MTEs dimension, which is referred to tourists' need to experience something new (Bec et al., 2019; Kim & Ritchie, 2014). Yu et al. (2019) has pointed out the essence of tourists' engagement in MTEs since memories tend to be more vivid with strong personal experiences. Involvement plays an important role in tourists' evaluation of an experience, which enhances their feelings and deepens the cognitive intensity of their evaluation (Swinyard, 1993). The positive experience stored or remembered in a consumer's memory might be an important predictor of future behavioral intentions (Hung et al., 2014; Larsen, 2007). MTEs are important because the tourists' future decision-making would be influenced by remembered experiences (Kim, 2017; Wirtz et al., 2003).

As the experience economy conceptualization, one of experience outcome is memory (Pine & Gilmore, 1998). Su et al. (2016) indicate the significant influence of all four experience dimensions of rural tourism experience on positive arousal or memorability for nature-based tourism experiences. Researches also show that entertainment and escapism of rural tourism experience are intrinsic/affective motivational content, which are the strongest determinants of willingness to recommend activities to others through engagement in emotional arousal, memory and satisfaction (Güzel, 2014; Hosany & Witham, 2010; Kastenholz et al., 1999)ify the significant impacts of esthetics of rural tourism experience on memory, arousal, overall quality perception on B&B experiences in the United States (US). A study on the wine tourism context shows relevant impacts of esthetics and education over memory on satisfaction

(Quadri-Felitti & Fiore, 2013). Compared to the modern city lifestyles, the heritage, local culture, and myths of remote regions also constitute memorable and engaging tourism experience (Rainero & Modarelli, 2020; Roman et al., 2020). Despite these results link the rural tourism experience dimensions with memory, there is still scarce empirical evidence of the causal relationships between rural tourism experience and MTEs constructed from the rural tourism that might influence tourists' behavioral intentions (Hung et al., 2014), highlighting the dynamic, holistic feature of the tourism experience, including before, during, and after certain trip. This study, therefore, proposes the following hypotheses:

**H1a.** Education of rural tourism experience positively influences memorable rural-based tourism experiences.

**H1b.** Esthetics of rural tourism experience positively influences memorable rural-based tourism experiences.

**H1c.** Entertainment of rural tourism experience positively influences memorable rural-based tourism experiences.

**H1d.** Escapism of rural tourism experience positively influences memorable rural-based tourism experiences.

### 2.3.2. Connectedness to nature

In accordance with Mayer and Frantz (2004), connectedness to nature relates to individuals' emotional and experiential connections to nature. It is based on a biophilic foundation that attributes to human beings an innate predisposition to feel a bond with nature (Wilson, 1984). Various studies have indicated that connectedness is related to pro-environmental behavior (e.g., Frantz & Mayer, 2014), environmental attitudes (e.g., Olivos et al., 2011). Gosling and Williams (2010) state that the stronger feeling of connectedness to nature will lead to a higher predisposition to support pro-environmental behavior and a lower likelihood of damaging the natural environment.

An increase in connection to nature can be observed after people taking part in different types of nature activities, such as walks around or stays in natural areas (Liefänder et al., 2013; Olivos et al., 2011; Schultz & Tabanico, 2007). Schroeder (2002, 2007) indicate that personal experience with the place gives participants a sense of connection to nature, even the feeling of being included in the natural order of the environment. Both empirical studies and theory support the conclusion that experiences in nature can enhance connectedness to nature (Barton et al., 2016; Crawford et al., 2017; Giusti et al., 2018; Mayer & Frantz, 2004; Richardson & Sheffield, 2017). Mena-García et al. (2020) suggest that connectedness to nature is higher among those who participate in the nature walks, particularly on account of the arousing of memories, positive emotions from experiences in nature. Since rurality is almost the central and selling point in the rural tourism package (Reichel et al., 2000) and MTEs here are those selectively constructed and can be recalled from the rural tourism, we proposed the following hypothesis.

**H2.** Memorable rural-based tourism experiences positively influence connectedness to nature.

### 2.3.3. Environmental awareness

Environmental awareness is individuals' apprehension/concern about the various facets of environmental problems (Kim & Han, 2010; Paço & Raposo, 2009). Such awareness, which may be based on the information from the media, personal and other people's experiences, is likely to lead to eco-conscious behavior in daily life (Paço & Raposo, 2009). Despotović et al. (2021) has proposed a latent construct about farmers' environmental awareness as a multidimensional notion, i.e., environmental attitudes, environmental values, environmental knowledge, and environmental behavior.

Studies have shown that connectedness to nature, which refers to individuals' innate tendency to consider themselves to be part of nature, is related to well-being (Fretwell & Greig, 2019), environmental

attitudes (Olivos et al., 2011) and pro-environmental behavior (Frantz & Mayer, 2014). Mayer and Frantz (2004) indicate the necessity of determining people's connectedness to nature for the assessment of environmental awareness. Fretwell and Greig (2019) identify and explore a number of useful insights into the complex relationships existed between an individual's subjective connection to nature and aspects of their personal well-being and environmental awareness. When people come into contact with nature, they will subconsciously integrate with nature, believing that the destruction of nature is destroying themselves, and thus improve their environmental awareness, which encourages them to be more environmentally friendly (Fretwell & Greig, 2019).

Much evidence has also shown that experience in nature might lead to several positive outcomes, including revitalization (Ryan et al., 2010), uplifted mood (Joye & Bolderdijk, 2015), and psychological restoration (Carrus et al., 2017; Staats, 2012). Pro-environmentalism can also be increased by exposure to nature. Di-Clemente, Hernández-Mogollón, and Campón-Cerro (2020) find the relations between environmental concern and outdoor recreation. Bjerke et al. (2006) emphasize a positive relationship between outdoor recreation activities preference and environmental attitudes. Moreover, research reports that those who have more frequent contacts with plants and wild animals exhibit stronger willingness and biophilia to protect animals (Zhang et al., 2014). Although the positive relation is supported between the experience in nature and pro-environmentalism or environmental concerns (Collado & Corraliza, 2015; Crawford et al., 2017), it is unclear which processes and factors have influence on the relation between memorable rural-based tourism experiences and environmental awareness, let alone the relation between rural tourism experience and green consumption. The following hypotheses, therefore, are proposed.

**H3.** Memorable rural-based tourism experiences positively influence environmental awareness.

**H4.** Connectedness to nature positively influences environmental awareness.

### 2.4. Response: green consumption

Green consumption is defined as customers' preference, willingness, and possibility to consume products that are environmentally friendly and sustainable in nature (Rashid, 2009). During the last two decades, there have been a proliferation of studies on the drivers to green consumption. Bray et al. (2011) investigate the drivers to ethical consumption, considering social aspects and environmental ones. Kaufmann et al. (2012) develop a conceptual framework taking the factors affecting consumers' green purchasing behavior into consideration. Testa et al. (2021) attempt to detect and classify the main drivers to green consumption considering the keywords from the literature published from 2000 to 2018, i.e., green, sustainable, environmental or pro-environmental behavior/intention/purchase or consumption/consumer. Seven categories of drivers to green consumption are identified, including behavioral factors, environment, personal capabilities, products and producers-related factors, etc.

Previous studies have demonstrated the lasting effects of experiences in nature on pro-environmentalism (Chawla & Derr, 2012; Cooper et al., 2015). Schultz (2001) demonstrate that 9 to 12 year-olds' direct experiences with nature (e.g., camping outdoor, picking plants or flowers) are associated with their willingness to preserve biodiversity. Contact with nature during childhood is as an important factor resulting in pro-environmental behavior for adults (Chawla & Derr, 2012; Collado & Corraliza, 2015; Evans et al., 2018). Pensini et al. (2016) found a direct link between exposure to nature and pro-environmental behaviour. Rosa et al. (2018) argue that the stimulation of pleasant experiences from direct contact with nature during childhood might trigger pro-environmental actions in adulthood. Despite the extensive research identifying the link between experience in nature and



pro-environmental behavior/intention, the relationship between the rural tourism experiences and post-experience consumption intentions has not been explored.

Among these drivers, environmental awareness has been widely recognized as one of the most relevant antecedents to pro-environmental behavioral intentions (Testa et al., 2021). Kaufmann et al. (2012) indicate that consumers who possess environmental awareness show green consumption intentions. Such awareness also pushes the individual to seek out the underlying causes of environment disruption and induces the sense of obligation to be environmentally friendly (Rahimah et al., 2018). According to Thøgersen et al. (2012), the people who care for the environment frequently participate in greening activities voluntarily instead of leaving the responsibility of environmental issues to the government and others.

Various studies have shown that connectedness is related to environmental attitudes (Olivos et al., 2011), and pro-environmental behavior (Frantz & Mayer, 2014). Those who are more strongly connected to nature exhibit greater empathy for nature, increased environmental concerns, and a greater desire to protect the environment and engage in pro-environmental behavior (Dong et al., 2020; Dutcher et al., 2007; Gosling & Williams, 2010; Mayer & Frantz, 2004). Pensini et al. (2016) find that children’s connectedness to nature partially mediated the relation between visits to nature-based environmental educational facilities or programs and ecological behaviors later in life. Thus, the following hypotheses are proposed. The conceptual model is presented as Fig. 1.

**H5.** Connectedness to nature positively influences green consumption.

**H6.** Environmental awareness positively influences green consumption.

**3. Methodology**

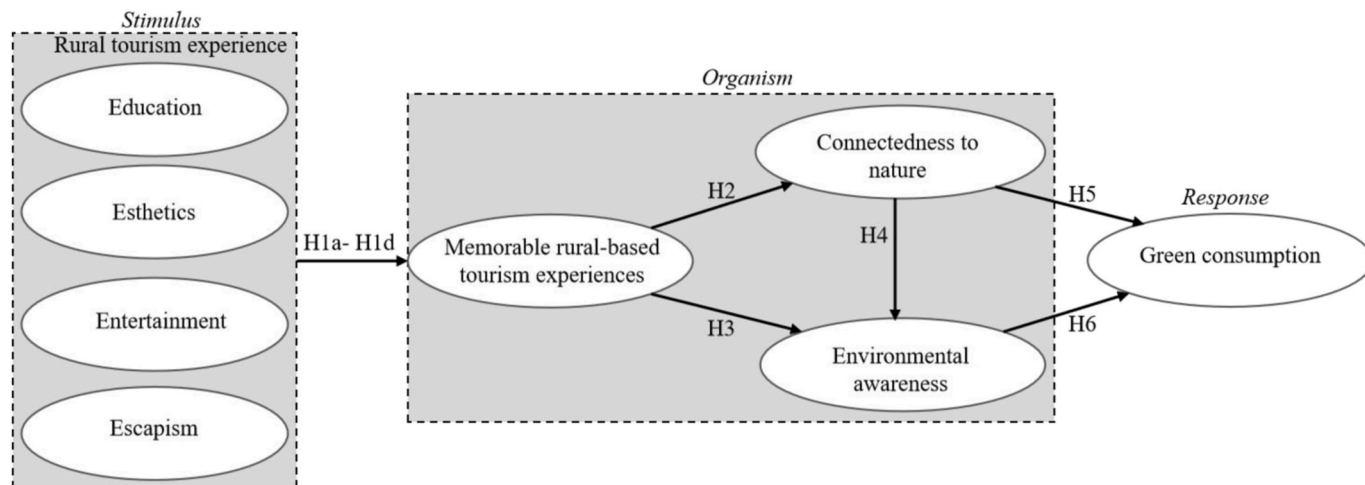
**3.1. Variables and measurement**

The four dimensions of rural tourism experience were measured with 16 items from Oh et al. (2007). Memorable rural-based tourism experiences were measured by Kim’s seven dimensions and twenty-four items scale, namely: hedonism, refreshment, local culture, meaningfulness, knowledge, involvement, and novelty (Kim, Ritchie, & McCormick, 2012). Examples of the items are, “My recent rural tourism experience indulged me in the activities”, “My recent rural tourism experience was unique”, “I had learned new culture during my recent rural tourism”. Connectedness to nature was measured by a fourteen items scale adapted from Mayer and Frantz (2004). Environmental awareness scale

was adopted from the four items used by Chen and Tung (2014) and Paul et al. (2016). A three items scale based on Kastenholz, Davis, and Paul (1999) was used to measure green consumption. All items were rated using a 7-point Likert-type scale (from 1 - strongly disagree to 7 - strongly agree). For a complete list of items and their corresponding sources, please refer to Table 2. The last part of the questionnaire

**Table 1**  
The profiles of the respondents (N = 319).

Demographics	Frequency	Percentage (%)	
Age	19–25	118	37
	26–35	102	32
	36–45	75	23.5
	46–55	19	6
	56 and above	5	1.6
Gender	Male	93	29.2
	Female	226	70.8
Education	Less than high school	10	3.1
	High School or equivalent	34	10.7
	higher vocational education	125	39.2
	Bachelor’s Degree	96	30.1
	Postgraduate and above	54	16.9
Income	No more than RMB 3,000	30	9.4
	RMB 3,001–5,000	49	15.4
	RMB 5,001–8,000	45	14.1
	RMB 8,001–10,000	52	16.3
	RMB 10,001–15,000	40	12.5
Position	More than RMB 15,000	103	32.3
	Student	89	27.9
	Retiree	4	1.3
	Professionals	18	5.6
	government agencies and institutions, state-owned enterprises	74	23.2
	civil servants	10	3.1
	Freelance	21	6.6
	Company staff	46	14.4
	Others	57	17.9
	Visiting group	Alone	33
With children		26	8.2
With friends		101	31.7
With family		154	48.3
With an organized tour		5	1.6
Times of visitation	First time	152	47.6
	Two times and more	167	52.4
Length of stay	Less than 1 day	90	28.2
	1 night	74	23.2
	2 nights	74	23.2
	3 nights	33	10.3
	4-6 nights	29	9.1
	More than one week	19	6



**Fig. 1.** Hypothesized model.

**Table 2**  
Results of confirmatory factor analysis (n = 319).

Dimension & Item	Factor Loading	Standard Error (SE)	t-value	SMC	CR	AVE	α
<b>Education (EC)</b>							
My recent rural tourism experience has made me more knowledgeable.	0.910			0.823	0.950	0.759	0.950
I learned a lot from my recent rural tourism.	0.930	0.038	27.800	0.861			
My recent rural tourism experience stimulated my curiosity to learn new things.	0.860	0.040	23.130	0.746			
My recent rural tourism was a real learning experience.	0.870	0.039	23.620	0.759			
My recent rural tourism experience was highly educational to me.	0.860	0.043	22.620	0.733			
My recent rural tourism experience really enhanced my skills.	0.800	0.053	19.450	0.634			
<b>Esthetics (ES)</b>							
I felt a real sense of harmony from my recent rural tourism.	0.810			0.654	0.933	0.698	0.932
Just being in the rural destination was very pleasant.	0.770	0.065	15.460	0.588			
The setting of the rural destination was pretty bland.	0.880	0.057	18.780	0.773			
The setting of my recent rural tourism was very attractive.	0.880	0.063	18.700	0.767			
The setting of my recent rural tourism really showed attention to design detail.	0.800	0.071	16.420	0.642			
The setting of my recent rural tourism provided pleasure to my senses.	0.880	0.056	18.660	0.766			
<b>Entertainment (ET)</b>							
Activities of others were amusing to watch in my recent rural tourism.	0.780			0.615	0.941	0.801	0.932
I really enjoyed watching what others were doing in my recent rural tourism.	0.950	0.063	20.090	0.901			
Activities of others were fun to watch in my recent rural tourism.	0.950	0.062	20.070	0.899			
Watching activities of others was very entertaining during my recent rural tourism.	0.890	0.068	18.310	0.787			
<b>Escapism (ESC)</b>							
I had completely escaped from reality during my recent rural tourism.	0.890			0.796	0.904	0.762	0.912
I had totally forgotten about my daily routine during my recent rural tourism.	0.990	0.045	24.190	0.976			
I had felt like I was living in a different time or place during my recent rural tourism.	0.720	0.041	16.080	0.514			
<b>Memorable rural-based tourism experiences (MRBTES)</b>							
<b>Hedonism</b>							
I was thrilled about having a new experience in my recent rural tourism.	0.870			0.750	0.948	0.820	0.947
My recent rural tourism indulged me in the activities.	0.920	0.045	24.010	0.850			
I really enjoyed my recent rural tourism experience.	0.920	0.041	23.800	0.850			
I felt excited about my recent rural tourism experience.	0.910	0.045	23.480	0.830			
<b>Novelty</b>							
My recent rural tourism experience was once-in-a-life experience.	0.620			0.380	0.874	0.637	0.818
My recent rural tourism experience was unique.	0.830	0.095	11.600	0.680			
My recent rural tourism experience was different from previous ones.	0.900	0.085	12.140	0.820			
I had experienced something new during my recent rural tourism.	0.820	0.077	11.530	0.670			
<b>Local culture</b>							
I had good impressions about the local people in the rural destination.	0.920			0.850	0.938	0.836	0.938
I had closely experienced the local culture during my recent rural tourism experience.	0.870	0.039	23.750	0.750			
Local people in the rural destination were friendly.	0.950	0.035	29.310	0.910			
<b>Refreshment</b>							
My recent rural tourism experience was liberating.	0.820			0.670	0.945	0.811	0.944
I had enjoyed sense of freedom during my recent rural tourism experience.	0.900	0.051	20.040	0.800			
I had a refreshing rural tourism experience.	0.960	0.046	22.290	0.910			
I had a revitalized rural tourism experience.	0.930	0.048	21.360	0.870			
<b>Meaningfulness</b>							
I did something meaningful in my recent rural tourism.	0.880			0.780	0.935	0.829	0.934
I did something important in my recent rural tourism.	0.980	0.040	27.160	0.960			
I had learned about myself during my recent rural tourism.	0.860	0.046	22.210	0.750			
<b>Involvement</b>							
I visited a place where I really wanted to go in my recent rural tourism.	0.890			0.800	0.931	0.819	0.931
I enjoyed activities which I really wanted to do in my recent rural tourism.	0.910	0.045	23.850	0.820			
I was interested in the main activities of my recent rural tourism experience.	0.910	0.041	24.100	0.830			
<b>Knowledge</b>							
My recent rural tourism experience was exploratory	0.870			0.760	0.929	0.814	0.927
My recent rural tourism experience was knowledge.	0.940	0.041	23.630	0.880			
I had learned new culture during my recent rural tourism experience.	0.900	0.041	22.340	0.810			
<b>Connectedness to nature (CTN)</b>							
I often feel a sense of oneness with the natural world around me.	0.820			0.669	0.931	0.658	0.928
I think of the natural world as a community to which I belong.	0.860	0.059	18.420	0.738			
I recognize and appreciate the intelligence of other living organisms.	0.850	0.051	18.140	0.724			
When I think of my life, I imagine myself to be part of a larger cyclical process of living.	0.840	0.055	17.750	0.704			
I often feel a kinship with animals and plants.	0.830	0.053	17.500	0.689			
I feel as though I belong to the Earth as equally as it belongs to me.	0.720	0.060	14.440	0.524			
I have a deep understanding of how my actions affect the natural world.	0.750	0.054	15.100	0.560			
<b>Environmental awareness (EA)</b>							
I am extremely worried about the world's environment.	0.920			0.854	0.866	0.620	0.885
To achieve sustainable development, I think people should live in harmony with nature.	0.760	0.042	15.840	0.570			
The balance of nature is very delicate and easily upset.	0.670	0.067	13.300	0.444			
I am willing to control my consumption to realize the sustainable development.	0.780	0.054	16.660	0.613			
<b>Green consumption (GPI)</b>							
I will purchase green products for personal use.	0.960			0.920	0.940	0.839	0.938
I am willing to purchase green products for personal use.	0.950	0.030	33.620	0.901			
I will make an effort to purchase green products.	0.840	0.039	23.470	0.697			

CR = composite reliability, AVE = average variance extracted.

concerned socio-demographic data: gender and age.

### 3.2. Sample and data collection

Using the measurement items described above, a questionnaire was prepared. The questionnaire was administrated online, in a snowball sampling approach, to Chinese tourists who are above the age of eighteen and has participated in rural tourism. With sufficient tourism resources for rural tourism development, Chinese people can experience diverse natural landscape. Traditional folk customs and agricultural resources provide a compelling foundation for product development and tourism activities (Xie, 2015). Chinese rural tourism has progressed a lot over the last three decades. The number of Chinese rural tourists reached 3.3 billion in 2019, accounting for roughly half of all Chinese domestic tourists, and revenue from rural tourism exceeded 850 billion yuan (Xinhua News Agency, 2019).

According to Brislin (1980), conventional translation and back-translation procedures were adopted to ensure correct translation and meaning equivalence. Since scales were adopted from Western literature, the questionnaire was first developed in English and then translated into Chinese by two bilinguals. After comparing the initial and translated English versions and revising those in disagreement, an expert, whose native language is Chinese, further checked and polished the questionnaire. A pilot test was performed in order to better refine the wordings for the main study. To test the quality of the scale, fifty pre-surveys were distributed.

This study selected the tourists who have participated in rural tourism during the previous five years. A pre-screening question was designed in the questionnaire to confirm that rural tourism was the main purpose of the visit. The large scaled survey was carried out from July to August 2021.

To minimize bias of potential social desirability, the respondents were informed in advance of the complete anonymity of the survey and that the collected data were only used for academic purposes. At the beginning of the survey, we defined rural tourism so that there was no confusion among the survey takers regarding its meaning. When filling out the survey, the participants were asked to think up their most recent rural tourism experience in last five years. In total, 345 respondents completed the survey. 319 valid questionnaires were used after removing the invalid ones and the valid rate was 92%. The self-reported most recent rural destinations of the respondents spanned a total of 80 cities in 29 different provinces. Such as “Donghua Village, Longtian Town, Chaonan District, Shantou City, Guangdong Province”, “Badaling Town, Yanqing District, Beijing”, “Grand Canyon Town, Huguang County, Changzhi City, Shanxi Province”, “Feilong Town, Wusheng County, Guang’an City, Sichuan Province”, “Xinshi Community, Yuquan Street, Meitan County, Zunyi City, Guizhou Province”, “Niulwan Village, Xindianzi Town, Helinger County, Hohhot City, Inner Mongolia Autonomous Region”, etc.

The demographic information of the respondents is shown as Table 1. There were 226 females (70.8%) and 93 males (29.2%). The majority of them were between the age of 26 and 40. Regarding educational level, 34 respondents received only high school or equivalent, 125 respondents received some higher vocational education, 96 respondents received a Bachelor’s degree, and 54 respondents earned postgraduate or above. The majority of the tourists (52.4%) had visited these sites two times or more. Travel companions were mainly their families and friends.

### 3.3. Data analysis

SPSS 20.0 and Amos 24.0 were used as the main tools for data analysis. SPSS 20.0 was firstly used to determine the reliability based on Cronbach’s  $\alpha$ . Then, Amos 24.0 was used to perform composite reliability (CR), a confirmatory factor analysis (CFA), and convergence validity analysis on the measurement model. Based on these results,

structural equation modeling (SEM) was used to validate the overall structural model and conduct the proposed hypotheses testing.

This study examined the data for missing values and outliers and found none before conducting statistical analyses. Skewness (range: -1.393 to 0.259) and kurtosis (range: -1.346 to 1.463) values for each measurement item indicated the normal distribution of the data (Kline, 2005).

## 4. Results

### 4.1. Measurement model

Composite reliability (CR) and Cronbach’s  $\alpha$  represent the consistency of the scale items. Table 2 revealed that Cronbach’s  $\alpha$  values for each scale were adequate, with the values no less than 0.818. The CFA results have shown that except for the lowest factor loading (0.62) of “My recent rural tourism experience was once-in-a-life experience”, and the factor loading (0.670) of “The balance of nature is very delicate and easily upset”, the factor loadings of all the other items were higher than 0.7. The composite reliability (CR) values of all variables were between 0.866 and 0.962, above the standard of 0.7, and the average variance extracted (AVE) values were between 0.620 and 0.839, above the 0.5 threshold as Table 2. Thus, according to Fornell and Larcker (1981), the measurement has a convergence validity.

Discriminant validity was assessed by comparing the square root of the AVEs for each construct with the inter-construct correlations among the factors in the model. From Table 3, it can be seen that all correlations are lower than the square root of each AVE, which suggested discriminant validity of the measurement model (Fornell & Larcker, 1981).

### 4.2. Structural equation model

To test the hypothesized relationships, Structural equation modeling (SEM) was employed. From the results shown in Table 4, the structural model fitted the data well ( $\chi^2 = 3992.070$ ,  $df = 1513$ ,  $\chi^2/df = 2.639$ , CFI = 0.885, IFI = 0.886, RMSEA = 0.072, SRMR = 0.0586).

The hypotheses in the study are all supported, except for the impact of the memorable rural-based tourism experiences on the environmental awareness of tourists (H3). Among them, the influence of the impact of connectedness to nature on environmental awareness (H4) is the most significant, and the standardized estimate is 0.877, followed by the memorable rural-based tourism experiences on connectedness to nature (H2) with a standardized estimate of 0.842. The impact of esthetics on memorable rural-based tourism experiences of tourists (H1b) has a standardized estimate of 0.319. Except for an apparently prominent role of esthetics (Kastenholz et al., 2018), the other dimensions of rural tourism experience differ in their effects. The impacts of education (H1a), entertainment (H1c) and escapism (H1d) on the memorable rural-based tourism experiences of tourists have standardized estimates of 0.262, 0.216 and 0.247 respectively. The  $R^2$  value of green consumption is 0.669, indicating that 66.9% of the variance is explained by the model.

To investigate the indirect effects on the dependent variable by the mediators, percentile bootstrapping, and bias-corrected percentile bootstrapping are performed at a 95% confidence interval with 5,000 bootstrap samples (Taylor et al., 2007). Followed the suggestions of Preacher and Hayes (2008), the confidence interval with the lower and upper bounds is calculated to test whether the indirect effects were significant. According to Baron and Kenny’s (1986), the classification of mediation effects include full mediation, partial mediation, direct effect only, and no-effect nonmediation. The full mediation effect occurs when the indirect effect through mediation is significant but the direct effect is not, and partial mediation exists when there are both direct and indirect effects. Additionally, direct effect only refers to the situation where the direct effect is significant but the indirect effect is not. No-effect nonmediation is detected when neither direct effect nor indirect effect is

**Table 3**  
Discriminant validity test of all constructs.

	AVE	ESC	ET	ES	EC	MRBTES	CTN	EA	GPI
ESC	.762	<b>.873</b>							
ET	.801	.461	<b>.895</b>						
ES	.698	.519	.821	<b>.835</b>					
EC	.759	.503	.730	.807	<b>.871</b>				
MRBTES	.785	.643	.783	.835	.801	<b>.886</b>			
CTN	.658	.542	.659	.703	.674	.842	<b>.811</b>		
EA	.620	.425	.517	.552	.529	.661	.811	<b>.787</b>	
GPI	.839	.398	.484	.517	.495	.618	.749	.796	<b>.916</b>

EC = Education, ES = Esthetics, ET = Entertainment, ESC = Escapism, MRBTES = Memorable rural-based tourism experiences, EA = Environmental awareness, CTN = Connectedness to nature, GPI = Green consumption.

**Table 4**  
Regression paths of the structural model (n = 319).

	Hypotheses	Estimate	Standardized Estimate	Standard Error (SE)	t-Value	P-Value	Results
H1a	EC -> MRBTES	0.248	0.262	0.053	4.687	***	Supported
H1b	ES -> MRBTES	0.360	0.319	0.080	4.483	***	Supported
H1c	ET -> MRBTES	0.236	0.216	0.062	3.803	***	Supported
H1d	ESC -> MRBTES	0.146	0.247	0.021	6.808	***	Supported
H2	MRBTES -> CTN	0.900	0.842	0.062	14.543	***	Supported
H3	MRBTES -> EA	-0.079	-0.078	0.088	-0.905	0.365	Not Supported
H4	CTN -> EA	0.832	0.877	0.090	9.213	***	Supported
H5	CTN -> GPI	0.326	0.312	0.099	3.312	***	Supported
H6	EA -> GPI	0.587	0.532	0.092	6.397	***	Supported

EC = Education, ES = Esthetics, ET = Entertainment, ESC = Escapism, MRBTES = Memorable rural-based tourism experiences, EA = Environmental awareness, CTN = Connectedness to nature, GPI = Green consumption.

significant (Nitzl et al., 2016; Zhao et al., 2010).

From Table 5, the mediating paths of rural tourism experience (education, esthetic, entertainment, escapism) →MTEs→connectedness to nature→tourists’ green consumption and rural tourism experience (education, esthetic, entertainment, escapism)→MTEs→connectedness to nature→environmental awareness→tourists’ green consumption are supported in the findings. The total effect of rural tourism experience (education, esthetic, entertainment, escapism) on green consumption is positive and significant ( $\beta = 0.699$ , SE = 0.071, 95% CI = [ 0.548, 0.829]). The direct effects of education, esthetic, entertainment and escapism are not significant, while their indirect effects are significant. For example, the direct effect of education on green consumption is not significant ( $\beta = 0.116$ , SE = 0.108, 95% CI = [-0.115, 0.324]) and the indirect its impact on green consumption via MTEs, connectedness to nature, and environmental awareness is positive and significant ( $\beta = 0.109$ , SE = 0.043, 95% CI = [0.044, 0.227]). Therefore, MTEs, connectedness to nature, and environmental awareness have been found

to play full mediating roles between rural tourism experience (education, esthetic, entertainment, escapism) and green consumption.

**5. Discussion**

This study contributes theoretically in discovering the mechanism of how rural tourism experience positively affects tourists’ green consumption after their visit. Rural tourism experience reinforces the creation of tourists’ positive and delightful memories. Memorable rural-based tourism experiences, connectedness to nature, environmental awareness are important predictors of tourists’ green consumption. The relationships between constructs are emerged from previous studies but, as far as we know, have not been tested empirically. The model was tested under the context of rural tourism. The results not only have a special contribution in understanding the antecedents of green consumption, but also reveal the pathways through which rural tourism experience influences green consumption. The results of current study

**Table 5**  
Results of mediating test.

Path	Point Estimate ( $\beta$ )	Standard Error (SE)	Z	Bias-corrected percentile 95%CI		Percentile 95%CI		Results
				Lower	Upper	Lower	Upper	
EC -> MRBTES -> CTN -> GPI	0.073	0.040	1.825	0.017	0.184	0.013	0.169	Supported
EC -> MRBTES -> CTN -> EA -> GPI	0.109	0.043	2.535	0.044	0.227	0.038	0.208	Supported
ES -> MRBTES -> CTN -> GPI	0.106	0.057	1.860	0.032	0.268	0.019	0.240	Supported
ES -> MRBTES -> CTN -> EA -> GPI	0.158	0.056	2.821	0.068	0.308	0.057	0.274	Supported
ET -> MRBTES -> CTN -> GPI	0.069	0.037	1.865	0.013	0.163	0.012	0.156	Supported
ET -> MRBTES -> CTN -> EA -> GPI	0.104	0.042	2.476	0.039	0.215	0.036	0.210	Supported
ESC -> MRBTES -> CTN -> GPI	0.043	0.021	2.048	0.011	0.099	0.008	0.091	Supported
ESC -> MRBTES -> CTN -> EA -> GPI	0.064	0.021	3.048	0.028	0.114	0.026	0.110	Supported
<b>Direct Effects</b>								
EC -> GPI	0.116	0.108	1.074	-0.115	0.324	-0.084	0.334	Not Supported
ES -> GPI	-0.006	0.138	-0.043	-0.248	0.270	-0.293	0.256	Not Supported
ET -> GPI	-0.042	0.111	-0.378	-0.253	0.188	-0.253	0.182	Not Supported
ESC -> GPI	-0.050	0.030	-1.667	-0.115	0.005	-0.111	0.006	Not Supported
Total Effects	0.699	0.071	9.845	0.548	0.829	0.552	0.834	Supported

EC = Education, ES = Esthetics, ET = Entertainment, ESC = Escapism, MRBTES = Memorable rural-based tourism experiences, EA = Environmental awareness, CTN = Connectedness to nature, GPI = Green consumption.



conform to the previous research, having theoretical and managerial implications.

### 5.1. Theoretical implications

This paper has made several contributions to the current tourism literature. Firstly, the current study expands the existing literature in tourists' green consumption by considering the rural tourism experience. Previous research has focused on rural tourism and environmental sustainability from pre-experience or on-site experience perspectives, and effects of direct experience in nature to green consumption. Hardly any attention has been given to consider the drivers to green consumption from rural tourism experience in a post-experience perspective. This paper proposes an insight to understand impacts of rural tourism experience on green consumption via S-O-R theory, which makes theoretical contribution in explaining the mechanism of how rural tourism affects tourists' green consumption later in life. The current paper proposes that rural tourism experience can positively influence tourists' green consumption through memorable rural-based tourism experiences, connectedness to nature and environmental awareness. When rural tourists enjoy the stimuli provided by the environment, which can include the atmospheric cues inside contemplation of the landscape and also the rural housing, using the five senses (Oh et al., 2007; Pine & Gilmore, 1998), positive and delightful memories will tend to increase. Such memories further enhance tourists' connectedness to nature. Rural tourists who feel somehow connectedness to nature from their delightful memories of rural tourism experience may gradually reinforce environmental awareness, increasing their likelihood of green consumption intention even after their visits in the rural destinations.

Furthermore, this paper further confirms that memorable rural-based tourism experiences, connectedness to nature and environmental awareness play full mediation roles in the relationship between rural tourism experience and tourists' green consumption. The direct impact of rural tourism experience on green consumption is not supported in this study. However, a direct link between exposure to nature and pro-environmental behaviour is found by Pensini et al. (2016). The authors believe that this inconsistency might be caused by the different experience measurement scales. The natural environment exposure scale constructed in Pensini et al. (2016) is composed of a list of 13 common natural environments in Australia. Rural tourism, different from the nature-based experience, can include complex multi-faceted activities in rural areas, such as theme festivals, educational travel, arts and heritage tourism, and so on. The rural tourism experience scale used in this study is more than just an assessment of the natural environment. Thus, the direct relationship between rural tourism experience and green consumption cannot be built.

Thirdly, this is the first attempt to capture the impacts of the four dimensions of rural tourism experience on tourists' green consumption. As Pine and Gilmore (1998), the four dimensions are also confirmed for the rural tourism experience with the data collected in this study. The suggested effects of dimensions of rural tourism experience on memorable rural-based tourism experiences (H1a to H1d) are supported, with the "esthetics" standing out. That is the esthetics dimension of experience emerges as the most relevant one in forming memorable rural-based tourism experiences. Education and escapism have moderate effects, while entertainment has a small effect on memorable rural-based tourism experiences. Positive memories can apparently be enhanced by the interesting learning of cultural, social, geographical contents and living styles of countryside during rural tourism. The results are in line with other studies (e.g. Carneiro et al., 2015, pp. 79–101; Dolcos & Cabeza, 2002; Kastenholz et al., 2018; Oh et al., 2007; Park & Yoon, 2009) in rural tourism, which indicates the esthetic as a major theme, particularly considering nature and landscape, on the formation of positive memories. Moreover, when considering the indirect effects of rural tourism experience on green consumption, the "esthetics"

dimension of rural tourism experience has the greatest effects ( $\beta = 0.158/0.106$ ), followed by "education" ( $\beta = 0.109/0.073$ ) and "entertainment" ( $\beta = 0.104/0.069$ ). It is worthy to notice that "esthetics" and "education" of rural tourism experience on green consumption are more active, and important dimensions. Therefore, this study extends the existing literature, providing a holistic view to help understand the lasting effects of the dimensions of rural tourism experience on tourists' green consumption.

Our findings further prove memorable rural-based tourism experiences plays a significant role in linking rural tourism experience with green consumption. The memorable experiences formed from rural tourism experience, such as the feelings of well-being, certain natural reflections in these experiences, has significant positive effects on connectedness to nature. When people experience a sense of connection to nature, they subconsciously integrate with it, and their environmental awareness improves. The link between positive experiences in nature and pro-environmentalism is also supported by empirical evidence (Chawla & Derr, 2012; Collado & Corraliza, 2015; Evans et al., 2007; Hinds & Sparks, 2008). This study not only confirms the foundation of memorable rural-based tourism experiences for formulating connectedness to nature and environmental awareness which are the important predictors for green consumption intention, but also demonstrates its significance in linking rural tourism with tourists' green consumption after visit. It advises managers to effectively utilize the rural tourism experience to cultivate memorable tourism experiences to foster tourists' green consumption intention later in life.

Meanwhile, the lacking contribution of the memorable rural-based tourism experiences to environmental awareness should be attributed to the respondents' relatively short time spent in rural areas. Those who spend less than one day in rural tourism destinations account for 28.2% of the total survey sample, while those who stay for one night account for 23.2%. That is, less than half of tourists stay for more than one day, which makes such a transformation into environmental awareness from rural tourism experience less likely.

### 5.2. Managerial implication

As far as practical implications are concerned, when tourists have formed memorable rural-based tourism experiences, they will enhance their perceptions of their connection with the natural environment, thus improving environmental awareness, in turn, stimulating green consumption. Since memorable rural-based tourism experiences, between rural tourism experience and connectedness to nature, is a key factor affecting tourists' post-experience green consumption in such a tourism context, marketers should utilize memorable tourism experiences from rural tourism to build positive memory of tourists. This finding is of great importance to practitioners because memorable rural-based tourism experiences (hedonism, refreshment, local culture, meaningfulness, knowledge, novelty, and involvement) can ultimately promote their connection with the natural environment. Then there will be substantial impacts on rural tourists' environmental awareness, and pro-environmental behavioral intentions.

The tourism marketers need to emphasize rural destination experience, and to build memorable rural-based tourism experiences with tourists, since people tend to have a positive memory when they experience education, entertainment, esthetics, escapism at the rural tourism destination. Along with the accelerating process of urbanization in China, rural travel offers tourists a good choice for entertainment and escaping from a crowded city lifestyle, especially when stringent pandemic containment measures are adopted currently (Wen, Kozak, Yang, & Liu, 2021; Yang & Wong, 2020). Furthermore, the impact of esthetics on memorable rural-based tourism experiences highlights the importance of preserving the features of the landscape. While appreciating the rural buildings, nature, and agricultural landscapes, tourism managers could also emphasize these elements to promote the rural destination. People are eager to experience an idyllic lifestyle in rural

areas, not only because of an experience of escapism, esthetics and entertainment, but also education.

Rural areas are also important learning environments, with education dimension of rural tourism experience in these areas contributing to memorability. The educational resources in the rural area can be widely dispersed, such as handicrafts, agricultural products, and farming tools. In this kind of environment, tourists can appreciate and actively participate in experiencing a rural lifestyle. It can also serve as a meaningful educational experience, and thus, enables tourists to escape from the reality (Carvalho et al., 2016). Some competitions about environmental knowledge could also be held in schools or other places where people work. These contests have the potential to boost their understanding of green and environmentally friendly items and, as a result, promoting green consumption later in their life. Thus, practitioners in rural tourism management could provide meaningful, interactive educational opportunities for tourists to actively appreciate and deliver value from these rural resources.

## 6. Conclusions

This study explores the impacts of rural tourism experience on tourists' green consumption by employing the S-O-R model. In the current study, the rural tourism experience can be viewed as a stimulus to tourists, memorable rural-based tourism experiences, connectedness to nature and environmental awareness are intrinsic states (Organism) of tourists, and green consumption is the response. Theoretically, the current research extends the rural tourism literature and proposes that the variables could actively act as triggers of tourists' green consumption. Based on S-O-R model to explore the inner realization path and mechanism from rural tourism to green consumption, three major conclusions can be drawn: (1) There is a positive relationship between rural tourism experience and tourists' green consumption after visit. (2) A rural tourist who creates a memorable experience from rural tourism, feels somehow connectedness to nature and forms environmental awareness, is more likely to engage in green consumption. (3) The esthetics and education emerges as two most relevant dimensions of rural tourism experience in shaping tourists' green consumption.

However, when interpreting our results, some limitations should be addressed. Firstly, our design is cross-sectional and our sample is non-probabilistic, which hinders the generalization of results and causality inferences. Secondly, the survey was conducted in the year 2021. China has reinforced stringent pandemic prevention measures, thus, it is unclear how tourists' perceptions and behaviors will be influenced during COVID. We encourage future research to take COVID-related variables (e.g. perceived risks and health consciousness as well as vaccine status) into account. Finally, while evidence is found for the mediating roles of memorable tourism experience, connectedness to nature, environmental awareness between rural tourism experience and green consumption, we would like to attest that the entirety of tourists consumption intentions are unlikely due to a single reason. Further research in this domain is clearly warranted.

## Declaration of competing interest

No potential conflict of interest was reported by the author(s).

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