

THE TRANSFORMATIVE ROLE OF PLACE ATTACHMENT IN CONVERTING SUSTAINABILITY PERCEPTIONS INTO ACTIVE TOURIST ADVOCACY

Amany E. SALEM ^{1*}, Thowayeb H. HASSAN ^{1*},
Muhammad M. ALFEHAID ^{2}, Fahad M. ALHUQBANI ^{3}, Mahmoud I. SALEH ^{4},
Insaf Sanhouri Babiker AHMED ^{5}, Mohamed A. NORELDEEN ^{6}

¹ King Faisal University, Social Studies Department, College of Arts, Al Ahsa, Saudi Arabia; asalem@kfu.edu.sa (A.E.S.); thassan@kfu.edu.sa (T.H.H.)

² Imam Mohammad Ibn Saud Islamic University (IMSIU), Department of Geography and GIS, College of Social Sciences, Riyadh, Saudi Arabia; mmalfehaid@imamu.edu.sa (M.M.A.)

³ King Saud University, Tourism & Hotel Management Department, College of Tourism & Archaeology, Riyadh, Saudi Arabia; falhuqbani@ksu.edu.sa (F.M.A.)

⁴ Helwan University, Tourism Studies Department, Faculty of Tourism and Hotel Management, Cairo, Egypt; mahmoudibraheam580@gmail.com (M.I.S.)

⁵ King Faisal University, Department of Geography College of Arts, Al Ahsa, Saudi Arabia; isahmed@kfu.edu.sa (I.S.B.A.)

⁶ King Faisal University, Geography Department, Faculty of Arts, Alahsa, Saudi Arabia; mnoreldeen@kfu.edu.sa (M.A.N.)

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Abstract: While a significant body of literature exists on sustainable tourism, little is known about the psychological mechanisms by which perceptions of sustainability are translated into advocacy behaviors. The affective and identity-based pathways that connect sustainability to proactive advocacy have been poorly theorized, as the majority of the literature has predicted advocacy from direct cognition rather than affective mediators. Further, advocacy has been under-researched as a dependent variable compared to revisit intention, even though it is higher up the loyalty hierarchy and represents more valuable behavioral outcomes for destination marketing and management. The current study aims to address these critical gaps by examining the mediating role of place attachment in the sustainability-advocacy relationship within community-based tourism contexts. It developed and empirically tested the comprehensive hypothesis that place attachment was the core psychological mechanism that transformed perceptions of sustainable development into advocacy behaviors through both emotional and functional pathways. Thus, the study employed a quantitative cross-sectional survey design with 377 tourists in the Egyptian community-based tourism sector, using structural equation modeling to test the hypothesized relationships among perceived sustainability dimensions, place attachment components, and advocacy intentions. Results demonstrated that perceived sustainability is significantly associated with place attachment, which fully mediates its effect on advocacy intention for economic and cultural sustainability dimensions, while partially mediating environmental sustainability effects. These findings extend theoretical understanding by demonstrating that economic and cultural sustainability require complete psychological transformation through place attachment before influencing advocacy, whereas environmental sustainability operates through both affective bonding and direct normative pathways.

Keywords: sustainable tourism, advocacy behaviors, place attachment, perceived sustainability, psychological mechanisms, community-based tourism

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INTRODUCTION

The current tourism landscape is undergoing a shift, with sustainability moving from a secondary consideration to a primary determinant of destination success, particularly in community-based contexts where visitor experience and community wellbeing intersect profoundly (Moscardo et al., 2013). This evolution reflects broader societal shifts towards conscious consumption and ethical travel, creating a new psychological dynamic between tourists and destinations that goes beyond typical measures of satisfaction. In developing economies like Egypt, community-based tourism is not only an economic activity but also a complex socio-ecological system in which perceptions of sustainability may evoke strong emotional ties that facilitate higher levels of advocacy than loyalty measures.

While existing research has identified a correlation between sustainability and intent to revisit the destination (Mohaidin et al., 2017), the psychological process of transforming sustainability perception into passionate advocacy is largely uncharted territory in research to date, particularly in Asian culture where community values and collectivist

* Corresponding author

identities might lead to different experience triggers than destinations based in other cultural experience. The convergence of sustainability assessment in cognition, emotional place bonding, and behavioral advocacy marks an emergent frontier toward understanding contemporary tourism relations in community contexts.

As tourists increasingly seek meaning and ethical alignment with destination values, they embrace active advocacy in communities as part of identity expression and value alignment (Sukma et al., 2025). This is especially pertinent in community-based tourism contexts, where authenticity and 'localness' impact visitor perceptions. The multidimensional conception of sustainability - framed as economic viability, cultural preservation, and environmental stewardship - initiates a complex tapestry of emotional indicators for visitors that will involve emotional bonds that may be more profound than was previously acknowledged in the tourism literature (Lee et al., 2015; Luong, 2023a), particularly when there is a grant of community welfare and cultural survival related to tourism. Although considerable academic interest has been directed toward sustainable tourism, significant theoretical gaps remain in our understanding of how psychological perceptions of sustainability encourage sustainable advocacy behavior (Scott, 2011). First, and perhaps most obviously, emotional and identity-based pathways connecting sustainability to proactive advocacy behaviors have not been well theorized, as the existing literature generally focuses on the direct cognitive connection rather than another significant mediating factor: affect. Second, advocacy has received limited attention from researchers, particularly compared to revisit intentions in tourism. Advocacy is a more effective way of expressing loyalty and offers greater economic value to organizations, since advocacy extends beyond personal behavior and influences others' travel intentions and behaviors (de Leaniz et al., 2024). Third, the formation of place attachment, a key to community-based behaviors such as advocacy, remains understudied culturally and contextually. Empirical studies have not been conducted in collectivist societies, specifically in Egypt, limiting the applicability of Western-developed theories to Southeast Asian perspectives, where community dependence and the valuing of relationships may significantly shape tourist engagement experiences.

This research addresses these gaps by proposing and testing a holistic theoretical model that positions place attachment as the primary psychological mechanism through which perceptions of sustainability translate into advocacy behaviors in Egyptian community-based tourism. By assessing the emotional and functional connections tourists make with sustainable destinations, this work further contributes to knowledge surrounding the psychological processes sustainability initiatives may elicit (Liu et al., 2021; Tang et al., 2025). Moreover, by examining advocacy rather than behavior as simple as saying, re-visititation, the current work captures a more meaningful behavioral range of loyalty regarding both organic promotion and defense to a destination. This research also provides cultural context for sustainable tourism in developing Asian economies, alongside valuable managerial recommendations for community-based tourism providers seeking to improve both their sustainability practices and their emotional connection with customers (Garbelli et al., 2017). Ultimately, the purpose of the current study is to answer the following questions to address this research gap:

1. How do distinct dimensions of perceived sustainability (economic, cultural, environmental) differentially influence the development of emotional and functional place attachment among tourists in Egyptian community-based tourism settings?
2. To what extent does place attachment serve as the psychological mechanism that translates sustainability perceptions into active advocacy behaviors?
3. How do emotional (place identity) and functional (place dependence) dimensions of place attachment comparatively predict various forms of advocacy in sustainable tourism contexts?

LITERATURE REVIEW

1. The Multidimensional Nature of Perceived Sustainability in Community-Based Tourism

Sustainable tourism has shifted over the years from a purely environmental protection approach to a comprehensive framework that encompasses economic viability, cultural authenticity, and environmental care, creating thoughtful consideration of tourism as a complex systemic phenomenon (Pulido-Fernández et al., 2014). Prior studies demonstrate that tourists' perceptions of sustainability can shape their evaluations of destinations and ensuing behavioral intentions. Across a variety of contexts, research confirms that sustainability practices improve the attractiveness and competitiveness of destinations (Phakdee-Auksorn et al., 2025). In particular, sustainability in community-based tourism is especially salient because it directly influences local livelihoods and the preservation of cultural integrity; thus, tourist perceptions carry noteworthy weight for a destination's viability. For example, research has shown that a community engaged in sustainable tourism development creates real experiences that resonate with more ethically conscious travelers (Sukma et al., 2025), while the economic, social, and environmental sustainability aspects subsequently shape the tourist experience. The economic aspect emphasizes that tourism generates jobs and fair wages for local communities; the cultural aspect preserves culture and integrity; and the environmental aspect is oriented toward caring for the ecosystem and minimizing the ecological footprint in destination locations (Choosuk et al., 2024; Judge et al., 2020).

Economic sustainability goes beyond generating profits; it also involves cooperative arrangements that enable local communities to secure a share of the value generated by tourism. Research has identified that economic sustainability in community-based contexts is about creating backward linkages, whereby income derived from tourism can be reinvested to support local industry sectors, including, but not limited to, agriculture and handicraft production, thereby creating multiplier effects throughout the local economy (Maldonado-López et al., 2024). In addition, research in developing contexts has shown that small-scale, locally owned tourism businesses are more likely to generate local economic benefits than large, foreign-owned developments. However, they may face challenges accessing markets and capital. Tourists' perception of financial sustainability, therefore, can range from a basic notion of value for money to an ethical assessment

of whether their stipend is genuinely accruing value to local communities. This notion aligns with the broader phenomenon of conscious consumption in tourism, where travelers are seeking more evidence that their economic spending directly contributes to the development of a local community rather than a foreign corporation (Wut et al., 2024).

The cultural and environmental aspects of sustainability create particularly robust and often emotional attachments in community-based tourism contexts. Cultural sustainability includes protecting intangible heritage, traditional knowledge systems, and authentic cultural representations from the homogenizing influences of globalization (Azhar et al., 2022; Ilies et al., 2022). Scholarship in indigenous tourism contexts has exemplified that cultural sustainability is about effectively negotiating the visibility of cultural presentations while respecting cultural integrity, with successfully moving tourism models permitting communities a degree of say in how their cultures are understood and experienced. Environmental sustainability extends beyond more traditional conservation contexts in community-based tourism and includes traditional ecological knowledge and community-based resource management systems that have supported functioning ecosystems for generations (Strobl et al., 2015). Correspondingly, research indicates that when tourists see actual communities stewarding environmental resources, this enhances the meaningfulness, experience quality, and potential enjoyment of conservation work (Lv et al., 2023). The overlap of cultural and environmental sustainability creates powerful narratives of resilience and adaptations that, when factors permit, can have great influence on tourist perceptions and experiences.

2. The Psychological Architecture of Place Attachment in Tourism

Place attachment refers to the intricate emotional connections and psychological ties that individuals have to specific physical places, consisting of two different but complementary aspects: place identity (the emotional and symbolic importance of place for the self) (Cordova-Buiza et al., 2024) and place dependence (the functional value of a place for a particular activity or experience). The conceptual foundation of place attachment was established through research in environmental psychology and human geography that identified place attachment in relation to recreation and tourism (Kaplanidou et al., 2012). In tourism contexts, place attachment has been shown to predict loyalty behaviors distinct from satisfaction, as emotionally attached tourists feel a sense of ownership and protective connectedness to a destination (Singh et al., 2025). Research has indicated that place attachment mediates visitors' experiences and loyalty (Lee & Xue, 2020), and studies have shown that place identity is a strong predictor of environmentally responsible behavior among tourists (Luong, 2023b). More recently, research conducted in Asian contexts has identified culturally influenced forms of attachment, including collectivist values, that shape emotionally driven attachment to place through community influences and relational experiences (Huang & Lin, 2023). Creating place identity is a complex set of psychological processes in which a destination is integrated into one's self-concept and identity story.

Scholars posit that the development of place identity is akin to that of social identity. In both cases, people gain self-esteem and a sense of differentiation from special places associated with personal identity. In tourism, the process of place identity development is often more rapid, as attitudes about identity are shaped by transformative experiences that break down previous worldviews or dramatically expand the self in moments of self-discovery (Chauhan, 2025). Some studies have found that the existential authenticity—being one's true self when traveling—of a tourist experience is a very significant factor in the development of place identity (Emadlou et al., 2025). This is particularly true when a destination provides a range of experiences that resonate with travelers' intrinsic values, hopes, and aspirations. The narrative aspect of place identity suggests that tourism experiences are often reframed as personal stories and spatially integrated into their life stories, creating emotional bonds to the destination that last well beyond the duration of the visit.

Place dependence constitutes the functional dimension of attachment, signifying the extent to which a destination fulfills specific activity needs and provides distinctiveness unavailable at alternative locations. The concept derives from a dependency theory standard in media studies, which posits that individuals develop a greater attachment to places that serve and fulfill essential goals, especially when those goals are difficult to achieve elsewhere. Studies in adventure tourism contexts have established that place dependence typically develops in destinations that offer an optimal balance of challenge and skill, stimulating flow experiences that are both immensely satisfying and difficult to replicate elsewhere (Liu & Huang, 2019). Community-based tourism is another context in which place dependence typically arises from the interaction of a unique, coordinated bundle of activities, social interactions, and the environment, generating an experience distinctive in nature (Chi & Han, 2021). Place dependence has functional characteristics, meaning it often develops more quickly than place identity, but is also often more susceptible to disruption when the destination changes or when other competitive options emerge that fulfill the same goals. Therefore, the study hypothesizes that:

H1: Perceived sustainability positively influences place attachment in community-based tourism settings, with cultural sustainability demonstrating the strongest effect, followed by environmental and economic sustainability dimensions.

3. The Psychological Transformation from Sustainability Perceptions to Advocacy Behaviors

Advocacy is the most active and influential form of destination loyalty because it involves personal revisit, promoting the destination positively, affirming others' experiences, and defending the destination when criticized (Su et al., 2016). While the theoretical link between sustainability and advocacy remains underexplored, existing research generally examines intermediary variables, such as satisfaction and destination image processes, that are closer to the actual emotional change that leads to the active promotion stage (Nguyen & Duong, 2024). While previous studies have established that perceived value acts as a mediator in the relationship between destination image and behavioral intention (Kong & Chang, 2023), others have found a direct relationship between sustainability and word of mouth recommendations

in specific destinations (Laachach & Alhemimah, 2024). The suggested role of place attachment as a potential mediating factor in these relationships provides an essential theoretical contribution, as emotional connections may help explain why some sustainable destinations elicit greater advocacy than others with similar sustainability credentials (Yamashita et al., 2024). Many studies find that place attachment predicts pro-environmental behavioral intentions (Li & Wu, 2019), while others have found that place identity can mediate relationships between festival experience and loyalty (Hazel Xu et al., 2022).

The psychological shift from sustainability awareness to advocacy behavior involves nuanced cognitive and affective processes that transcend rational decision-making paradigms. Cognitive consistency theories contend that when tourists develop strong place attachments toward a sustainable destination, they experience a psychological impetus to align with their affective bonds and sustainability values, and thus choose advocacy to relieve the cognitive dissonance they experience (Yilmaz et al., 2021). The literature supports this perspective: tourists who perceived consonance between their environmental values and the destination's sustainability practices experienced heightened satisfaction, which motivated them to share their experiences with others (Fuchs, 2025). Social identity processes may also come into play, in which advocacy allows tourists to signal membership in valued social groups (e.g., ethical travelers, enthusiasts of local culture) while reinforcing their own identity narratives (Salinero et al., 2022). This performative aspect of advocacy behavior, particularly in the age of social media, allows tourists to share sustainability-focused travel experiences with larger audiences and use them in the projection of identity.

In the context of community-based tourism, the emotional aspects of advocacy behavior are powerful because of relationships that go beyond the typical host-guest dynamics that transpire through travel. Studies have shown that transformative experiences in a community context can lead to feelings of moral obligation and reciprocity, which drive advocacy as a form of giving back for these experiences (Park et al., 2022). Also, the form of consumption philanthropy establishes that transacting tourists who feel that their travel is supporting community wellbeing may go as far as advocacy as a form of ethical consumption (Denley et al., 2020). The emotional effects of advocacy are further compounded when tourists feel that a community or environment they have developed an emotional attachment to faces external threats, leading to protective behaviors around communities and environments that may include advocating for the destination in response to criticisms or sharing the destination with others to ensure its economic sustainability (Wenxin, 2025). The most significant protective capacity lies in situations where advocacy arises from a genuine concern for the community or environment, rather than being driven by self-interest (Figure 1). Therefore, the study hypothesizes that:

H2: Place attachment (identity and dependence) mediates the relationship between perceived sustainability and advocacy behaviors.

H3: Place dependence has a stronger direct effect on advocacy intentions than place identity.

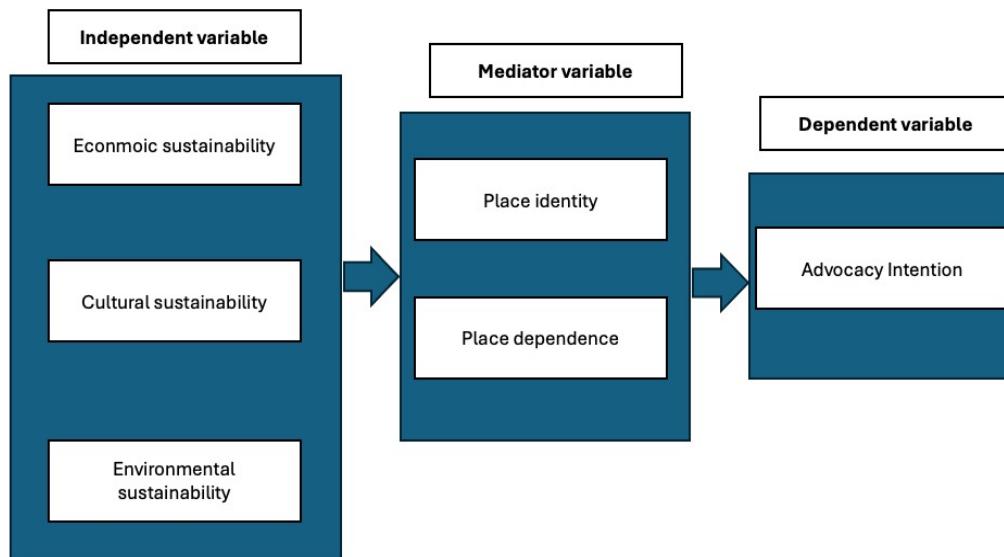


Figure 1. The Conceptual Framework

MATERIALS AND METHODS

1. Data Collection Procedures and Techniques

This study utilized a cross-sectional survey design to gather data from tourists who had participated in community-based tourism in Egypt. Data collection was conducted from March to June 2023 and targeted tourists who stayed for a minimum of three days in chosen community-based tourism locations in the Red sea. The survey instrument was developed through a thorough scale adaptation, contextual adaptation, and translation process. The items in English were translated into parallel back-translation method with reconciliation to provide for conceptual equivalence, linguistic accuracy, and cultural relevance. The homestay hosts and local tourism coordinators created a network for data collection. They received extensive training as research facilitators and administered the survey during times of high engagement with tourists—usually during an evening cultural activity or morning departure preparation.

2. Selection Criteria for Participants

The research utilized stratified purposive sampling to access participants who would be able to contribute significant meanings to the research phenomena and was also aimed at securing a diversity of sample across key demographic variables. Invited participants were required to be adult tourists (i.e. 18 years or older) who had completed a stay of no less than three consecutive nights in one of the research identified community based tourism sites and took part in two or more the community-based activities offered during their stay. This requirement established that participants had sufficient immersive engagement with the community-based tourism features of the destination to be able to recall enough detail and provide a sufficient response to the interview questions. The sampling strategy contained tourists who were both Canadian and from other countries, and quotas were developed to ensure gender, age, and travel motivations were present in the sample of tourists. Tourists were recruited from several different outlets including a homestay network (e.g., host family connections), community tourism cooperatives, and local guide associations.

Hosts and coordinators introduced the study via an invitation to tourists as they were departing and participants were invited to participate voluntarily. This multi-approach sampling recruitment method relied on a pre-existing trust relationship to recruit participants willingly while balancing potential selection bias with access points.

3. Sample Size and Sampling Method

Out of the 500 questionnaires given out, there were 377 valid responses, resulting in a 75.4% response rate, after removing any incomplete, inconsistent or improperly answered questionnaires. The sample size clearly exceeds the minimum for structural equation modelling (SEM), which recommends at least 10-20 observations for each estimated parameter, or for the sample to be greater than or equal to 200 total.

The descriptive statistics for the sample were representative of strategic diversity across gender (51.2% male, 48.8% female), age (12.5% under 20 years, 22.3% age 20-25 years, 27.6% age 26-30 years, 21.2% age 31-35 years, 16.4% over 35 years), and education level (24.1% high school, 44.6% bachelor/engineer, 31.3% master/PhD). Including a mixture of both domestic (68.4%) and international tourists (31.6%) added to the representativeness of the sample; however, the non-probability sampling method limits generalizability, which is a limitation to the study.

4. Measurement Instrument and Scale Development

The survey tool included existing multi-item scales that were adapted from the literature, with contextual adaptations, at the constructs level. All items for the scales utilized a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Perceived sustainability was measured as a second-order reflective-formative construct comprised of three dimensions: an economic sustainability dimension composed of four items, which included modifications adapted to the community context, a cultural sustainability dimension which included four items that incorporated cultural specificity, and an environmental sustainability dimension which included four items and considered ecological specificity. Place attachment was conceptualized as a second-order reflective construct comprised of two dimensions: place identity consisting of four items and a place dependence dimension with four items, at this dimension emotional depth modified within each item. Advocacy intention was measured as a first-order reflective construct that included five items with added items constructed to incorporate the defensive and proactive aspects of advocacy, privy to context and tourism (Table 1).

Table 1. Complete Measurement Scales and Item Specifications

Construct	Dimension	Item Code	Item Wording	Source Adaptation
Perceived Sustainability	Economic Sustainability	ECO1	"Local families receive fair economic benefits from tourism activities"	Modified from Iniesta-Bonillo et al. (2016)
		ECO2	"Tourism spending circulates within the local community rather than leaking out"	
		ECO3	"The destination provides stable employment opportunities for local residents"	
		ECO4	"Local businesses and artisans can sustain themselves through tourism"	
	Cultural Sustainability	CUL1	"Traditional cultural practices are authentically preserved and not commercialized for tourists"	Modified from Iniesta-Bonillo et al. (2016)
		CUL2	"Local heritage sites and historical places are well-maintained and respected"	
		CUL3	"Cultural festivals and traditions continue to be practiced with genuine community participation"	
		CUL4	"Younger generations are actively involved in learning and continuing cultural traditions"	
	Environmental Sustainability	ENV1	"Natural landscapes and ecosystems are protected from tourism-related degradation"	Modified from Iniesta-Bonillo et al. (2016)
		ENV2	"Waste management systems effectively minimize environmental pollution"	
		ENV3	"Water resources are conserved and protected from overuse or contamination"	
		ENV4	"The destination maintains biodiversity and protects native flora and fauna"	
Place Attachment	Place Identity	PID1	"This destination feels like it is part of who I am as a person"	Modified from Williams & Vaske (2003)
		PID2	"I feel a strong emotional connection to this place and its people"	
		PID3	"This destination symbolizes important personal values that I hold"	
		PID4	"I identify strongly with the atmosphere and spirit of this place"	
	Place Dependence	PD1	"This destination offers exactly the type of experiences I look for when traveling"	Modified from Jorgensen & Stedman (2006)
		PD2	"No other place I've visited compares to what I experience here"	
		PD3	"The activities available here are more important to me than those in other destinations"	
		PD4	"I get more satisfaction from visiting this destination than any other similar place"	

Advocacy Intention	ADV1	"I will actively recommend this destination to friends and family"	Modified from Akgunduz & Sanli (2017).
	ADV2	"I will share positive stories and photos about this destination on social media"	
	ADV3	"I will encourage others to visit this destination when they plan their travels"	
	ADV4	"I would defend this destination if I heard someone criticizing it unfairly"	
	ADV5	"I would choose to return here rather than try a new destination with similar offerings"	

RESULTS

1. Data Validity and Reliability Measures

The measurement model was rigorously evaluated using confirmatory factor analysis (CFA) in relation to reliability, convergent validity, and discriminant validity, with standardized factor loadings for all items exceeding the desired level of .6 (ranging from .68 to .84), demonstrating adequate item reliability. Composite reliability (CR) fell within the range of .83 to .91, well above the .7 cutoff, and Cronbach's alpha values ranged from .81 to .89 indicating adequate internal consistency. The average variance extracted (AVE) values ranged from .55 to .67, exceeding the .5 cutoff and establishing convergent validity. Discriminant validity was assessed according to the Fornell-Larcker criterion by confirming that the square root of AVE scores were larger than constructs correlations with other constructs, and the heterotrait-monotrait ratio (HTMT) was assessed and found to be below .85. The measurement model demonstrated a good fit of the data ($\chi^2/df = 2.18$, CFI = .94, TLI = .93, IFI = .94, RMSEA = .056) and met criteria for good model fit (Table 2).

Table 2. Reliability and Validity Assessment

Construct	CR	AVE	Cronbach's α	1	2	3
1. Perceived Sustainability	0.91	0.67	0.89	0.82		
2. Place Attachment	0.88	0.63	0.86	0.59	0.79	
3. Advocacy Intention	0.83	0.55	0.81	0.52	0.68	0.74

2. Demographic Results with Descriptive Statistics

A total of 377 tourists participated in the study, with gender being evenly distributed (51.2% male and 48.8% female). The ages indicated that the sample consisted primarily of middle-aged people, with the largest group aged 26-30 years (27.6%). There were also categories for respondents ages 31-35 (21.2%), 20-25 (22.3%), over 35 (16.4%), and under 20 years (12.5%). Education levels were also relatively high overall; 44.6% held a bachelor's/engineer degree, 31.3% a master/PhD, and 24.1% a high school education. In terms of ownership, the sample consisted of domestic tourists (68.4%) plus international tourists (31.6%). The primary motivators for traveling were cultural-based immersion (42.3%), appreciation of nature (35.7%), and interactions with the community (22.0%).

Following this process, descriptive statistics were calculated for the main constructs. When calculating descriptive statistics, exploratory descriptive statistics would indicate that all variables exceeded the scale midpoint, with cultural sustainability receiving the highest mean score ($M = 4.18$, $SD = 0.66$) and economic sustainability receiving the lowest mean score ($M = 3.91$, $SD = 0.71$). As well, for Aim 2, both place attachment ($M = 4.02$, $SD = 0.64$) and advocacy intention ($M = 4.08$, $SD = 0.68$) were also coded positively to build further positive intention (Table 3).

Table 3. Descriptive Statistics and Correlations (**p < 0.01)

Variable	Mean	SD	1	2	3	4	5	6
1. Economic Sustainability	3.91	0.71	1					
2. Cultural Sustainability	4.18	0.66	.46**	1				
3. Environmental Sustainability	4.05	0.73	.41**	.57**	1			
4. Place Identity	3.98	0.69	.38**	.52**	.49**	1		
5. Place Dependence	4.06	0.70	.44**	.43**	.47**	.56**	1	
6. Advocacy Intention	4.08	0.68	.40**	.48**	.51**	.61**	.67**	1

3. Structural Model and Hypothesis Testing

The structural model demonstrated a good fit with the data ($\chi^2/df = 2.24$, CFI = 0.93, TLI = 0.92, IFI = 0.93, RMSEA = 0.057). Hypothesis 1 suggested that perceived sustainability positively influences place attachment, which was strongly supported by the results ($\beta = 0.59$, $p < 0.001$). Looking closely at sustainability dimension specific effects, our analysis found that cultural sustainability had the strongest effect on place attachment ($\beta = 0.51$, $p < 0.001$), followed by environmental sustainability ($\beta = 0.38$, $p < 0.001$), and economic sustainability ($\beta = 0.31$, $p < 0.01$), thus supporting the dimensional hierarchy proposed by H1. Hypothesis 2 suggested that place attachment positively influences advocacy intention, which was again strongly supported ($\beta = 0.74$, $p < 0.001$). Following the similar pattern for the place attachment dimensions, our analysis found that place dependence ($\beta = 0.55$, $p < 0.001$) had a stronger effect on advocacy than place identity ($\beta = 0.49$, $p < 0.001$), thus supporting the differential effect proposed by H2.

4. Structural Model Analysis with Disaggregated Sustainability Dimensions

Analyzing direct relationships between individual sustainability dimensions within the mediation and outcome variables produces a more refined picture than the aggregated model does. The disaggregated structural model demonstrated acceptable

fit to the data ($\chi^2/df = 2.31$, CFI = 0.92, TLI = 0.91, IFI = 0.92, RMSEA = 0.059), which enabled a fine-tuned analysis of the unique way each sustainability dimension contributed to formation of place attachment and advocacy behaviors (Table 4).

Table 4. Disaggregated Structural Model Results

Relationship	Standardized β	SE	t-value	p-value	Result
Direct Effects on Place Identity					
Economic Sustainability → Place Identity	0.28	0.06	4.67	<0.001	Significant
Cultural Sustainability → Place Identity	0.45	0.05	9.00	<0.001	Significant
Environmental Sustainability → Place Identity	0.32	0.05	6.40	<0.001	Significant
Direct Effects on Place Dependence					
Economic Sustainability → Place Dependence	0.35	0.06	5.83	<0.001	Significant
Cultural Sustainability → Place Dependence	0.29	0.05	5.80	<0.001	Significant
Environmental Sustainability → Place Dependence	0.38	0.05	7.60	<0.001	Significant
Direct Effects on Advocacy Intention					
Economic Sustainability → Advocacy Intention	0.09	0.05	1.80	0.072	Not Significant
Cultural Sustainability → Advocacy Intention	0.11	0.06	1.83	0.067	Not Significant
Environmental Sustainability → Advocacy Intention	0.14	0.06	2.33	0.020	Significant
Mediator to Outcome					
Place Identity → Advocacy Intention	0.42	0.07	6.00	<0.001	Significant
Place Dependence → Advocacy Intention	0.51	0.06	8.50	<0.001	Significant

5. Differential Effects on Place Attachment Dimensions

The analysis shows different patterns of how each dimension of sustainability is influencing the two aspects of place attachment. Cultural sustainability has the strongest effect on place identity ($\beta = 0.45$), suggesting that cultural dimensions, such as authentic traditions, heritage preservation and community cultural practices, are the most significant forces underlying emotional bonding and identity attachment to destinations. This results supports theoretical frameworks that stress the fundamentally human need for cultural meaning and symbolic attachment, especially in tourism settings where cultural experiences are often the center of attraction. Environmental sustainability has the strongest effect on place dependence ($\beta = 0.38$), indicating environmental quality, conservation practices and protection of natural resources are paramount to establish functional bonds whereby tourists believe the destination is uniquely suitable for collecting the experiences they desire. This result suggests environmental attributes create the "stage" in which enjoyable experiences transpired, whereby fulfilling experiences relied upon environmental attributes and ultimately would be needed for functional attachment. Economic sustainability has moderate, yet substantial effects on both place identity ($\beta = 0.28$) and place dependence ($\beta = 0.35$), indicating appearances of economic fairness and local distribution of benefits contributes to both emotional and functional attachment, albeit through different psychological mechanisms.

6. Mediation Analysis with Disaggregated Sustainability Dimensions

The mediation analysis reveals complex indirect pathways through which sustainability dimensions influence advocacy intentions:

Table 5. Disaggregated Mediation Analysis

Indirect Pathway	Standardized β	95% CI Lower	95% CI Upper	p-value	Mediation Type
Economic → Place Identity → Advocacy	0.118	0.065	0.171	<0.001	Full Mediation
Economic → Place Dependence → Advocacy	0.179	0.112	0.246	<0.001	Full Mediation
Cultural → Place Identity → Advocacy	0.189	0.126	0.252	<0.001	Full Mediation
Cultural → Place Dependence → Advocacy	0.148	0.089	0.207	<0.001	Full Mediation
Environmental → Place Identity → Advocacy	0.134	0.081	0.187	<0.001	Partial Mediation
Environmental → Place Dependence → Advocacy	0.194	0.129	0.259	<0.001	Partial Mediation

The data collection and analysis indicate that place attachment fully mediates the relations for economic and cultural sustainability and partially mediates the relation for environmental sustainability, yielding the indicated relationship pattern. That is, economic and cultural sustainability place bonding perceptions truly require total psychological transformation, through emotional and functional bonding, before affecting advocacy behavior. Meanwhile, environmental sustainability resulted in a small, but significant, direct effect on advocacy after accounting for place attachment; therefore, environmental sustainability may elicit advocacy in further cognitive or normative paths beyond place bonding (Table 5).

DISCUSSION

The results of this study indicate an intricate psychological framework through which the various sustainability dimensions operate through different pathways to influence advocacy behaviors in community-based tourism settings. Through this disaggregated analysis, it was demonstrated that cultural, environmental, and economic sustainability dimensions follow different psychological pathways to stimulate place attachment and ultimately advocacy intentions. Beyond other sustainability dimensions, the particularly strong association of cultural sustainability with place identity reflects the role of cultural elements as the dominant catalyst for emotional bonding and for translating sustainable values

into personal identity connections (Laskarin Azic et al., 2023). This finding offers the perspective that cultural preservation and authentic cultural experiences afford tourists the substantive connections needed to embed destinations in their self-concept and identity scripts in community-based tourism contexts.

The significant link between environmental sustainability and place dependence ($\beta = 0.38$) indicates that environmental quality and preservation lay the foundation for functional bonding, in which tourists view destinations as uniquely capable of fulfilling their desires for experience (Lee & Jan, 2017). Economic sustainability, on the other hand, demonstrates equivalent impacts on place identity ($\beta = 0.28$) and place dependence ($\beta = 0.35$), indicating that perceptions of economic fairness affect attachment (whether emotional or functional) but likely through different psychological mechanisms (Cai et al., 2021). The finding that, of the two, place dependence has a more significant impact on advocacy intent ($\beta = 0.51$) than does place identity ($\beta = 0.42$) indicates that functional satisfaction is the main basis of attachment for advocacy behavior, possibly because functional experiences are easier to communicate to others than identity attachment (Han & Hyun, 2017).

The mediation analysis provides a revealing theoretical insight: Place attachment completely mediates the relationships for economic and cultural sustainability, while place attachment partially mediates the relationship for environmental sustainability. This pattern suggests that environmental sustainability may trigger advocacy through additional cognitive or normative pathways beyond place attachment, potentially invoking ethical obligation or environmental values (Sajid et al., 2024). In contrast, perceptions of economic and cultural sustainability require modifications in psychological perspective and are almost fully operationalized via emotional and functional place attachment to influence advocacy behavior.

The analysis of total effects offers additional representations of this complexity as cultural sustainability, with the strongest total effect on advocacy ($\beta = 0.348$) followed very closely by environmental sustainability ($\beta = 0.338$), and economic sustainability had a smaller total but still strong effect ($\beta = 0.297$).

1. Theoretical Contributions

This study provides several important theoretical contributions by explaining the psychological pathways through which sustainability dimensions affect advocacy behaviors. First, the disaggregated analysis shows that sustainability dimensions operate through distinct psychological processes rather than through a single mechanism (Baghirov et al., 2023). For instance, cultural sustainability primarily promotes emotional- and identity-based ties, whereas environmental sustainability provides functional ties and additional direct effects, and economic sustainability promotes emotional and functional bonding. This multidimensional processing framework challenges the aggregate approaches employed in much of sustainable tourism research. It adds greater theoretical clarity in understanding how the sustainability dimensions link with different psychological systems.

The finding that economic and cultural sustainability fully mediated, whereas environmental sustainability only partially mediated, constitutes an essential theoretical development in considering how psychological processes transform sustainability perceptions into behaviors. This pattern suggests that environmental sustainability may be driven by both emotional bonding and other cognitive or normative processes (Kala & Chaubey, 2023), but economic and cultural sustainability may require only a complete transformation through place attachment.

This study extends the affective transformation model by identifying boundary conditions that make cognitive and normative pathways relevant, especially for environmental sustainability, because moral obligations and ethical concerns can both be direct drivers of advocacy behaviors alongside emotional bonding.

The different influences on place identity and place dependence provide theoretical value towards understanding how various dimensions of sustainability influence the construction of place meaning. Cultural sustainability's greater influence on place identity adds theoretical significance to meaning-making and symbolic connection in sustainable tourism, as cultural sustainability elements provide the narrative content for place identities (Lee & Xue, 2020). Environmental sustainability's greater influence on place dependence adds to the theoretical significance of functional experience quality as the basis for bonding to a destination (Tan & Lin, 2020). This distinction contributes to place attachment theory by clarifying how different attributes of destinations can contribute to the emotional versus functional aspects of the relationship with place, thus providing a more sophisticated theoretical explanation for tourism psychology.

2. Managerial Implications

The disaggregated findings provide very specific, practical implications for community-based tourism operators and destination managers. The robust cultural sustainability-place identity pathway indicates that cultural attributes should be positioned as the emotional core of destination marketing and experience design (Ozer et al., 2025). This would involve not only showcasing culture, but ensuring opportunities for meaningful cultural participation so that tourists can directly experience living traditions. Managers should curate cultural experiences that foster personal transformation and meaningful identity expression, such as workshops with local artisans, cultural ceremonies that require participation, and authentic interactions that allow tourists to build genuine connections with community members (Safarov et al., 2024).

The strong environmental sustainability-place dependence relationship suggests that management practices for environmental sustainability should be framed not merely as conservation, but as crucial to maintaining the unique experience-based qualities for which destinations are treasured experiences to be shared (Jiang et al., 2025). Managers should demonstrate how specific environmental practices help protect the activities and settings that interest tourists, such as how waste management systems help preserve scenic beauty, or how meaningful consideration of conservation efforts has led to biodiversity outcomes that enhance wildlife viewing experiences. Finally, the partial mediation of environmental

sustainability suggests that messaging can also appeal more directly to environmental values and responsibilities in the motivation to advocate, especially among environmentally conscious segments of tourists (Torabi et al., 2025).

The findings on economic sustainability indicate that transparency on local economic benefits should be woven throughout the tourist experience rather than conveyed as non-integrated information. When tourists are aware of how their spending benefits the communities and environments they have come to appreciate, it will reinforce functional and emotional attachments (Minh et al., 2025). Managers should develop clear visual stories about economic distribution, such as infographics that show tourism dollars circulating in the community, or stories about specific businesses and families benefiting from visitors. Destination managers should also develop differentiated strategies for place identity rather than place dependence. Place identity is developed by creating emotional peaks rooted in meaningful cultural interactions and personal connections. In contrast, place dependence development must be underpinned by consistent delivery of high-quality experiences that deliver functional service expectations (Liu et al., 2015).

Accordingly, training initiatives for community members should, therefore, emphasize both cultural authenticity and service quality, since achieving emotional and functional satisfaction is necessary to cultivate advocates for the destination.

CONCLUSION

This research makes significant theoretical and practical contributions to sustainable tourism scholarship by unveiling the intricate psychological architecture through which sustainability perceptions transform into advocacy behaviors in community-based tourism contexts. By positioning place attachment as the central mediating mechanism and disaggregating sustainability into its constituent dimensions—economic, cultural, and environmental—this study demonstrates that the path from sustainability awareness to passionate destination advocacy is neither direct nor uniform, but rather operates through distinct emotional and functional pathways that vary by sustainability dimension.

The finding that cultural sustainability primarily drives emotional identity bonds while environmental sustainability fosters functional dependence attachments reveals a nuanced psychological landscape that has profound implications for both theory development and practical destination management. Importantly, the research challenges simplified assumptions in sustainable tourism literature by demonstrating that economic and cultural sustainability require complete affective transformation through place bonding before influencing advocacy, whereas environmental sustainability maintains dual pathways through both emotional attachment and direct normative appeals. For community-based tourism destinations in developing economies like Egypt, where sustainability is not merely an operational practice but a matter of cultural survival and community wellbeing, these insights provide actionable guidance for cultivating genuine tourist advocates who will organically promote, defend, and return to destinations. The robust mediation effects and high variance explained in advocacy intentions underscore that emotional and functional bonds are not peripheral considerations but rather the very essence of transforming sustainability efforts into sustained destination success.

As the global tourism industry continues its inexorable shift toward sustainable and ethical travel, understanding these psychological mechanisms becomes essential for destinations seeking not just visitor satisfaction but the creation of passionate advocates who will champion sustainable communities in an increasingly conscious travel marketplace.

The study limitations

This research has a number of limitations worthy to note when reviewing the findings as well as some recommendations for future exploration. First, cross-sectional data, while a valuable approach to understanding relationships between variables, limits definitive causal statements about the variables. Future studies could explore causal, and temporal, relationships using different research models including longitudinal designs or experimental studies. Second, the emphasis on community-based tourism in Northern Egypt, while presenting rich contextual understanding, limits comparisons to other tourism contexts and cultural settings. Replications of studies in varied destination types (e.g., urban tourism; coastal resorts) or cultural contexts (e.g., Western individualistic societies) would enhance the external validity and boundary conditions of the study.

Future studies should aim to capitalize on the dynamic interplay between place identity and place dependence across stages of the tourist experience and relationship with a destination. Data collections over time could allow for examination of growth or change in these dimensions after multiple visits, and potential changes in relative value for the relationship. Additionally, studies investigating neurological and physiological correlates of place attachment may add increased understanding of the embodied nature and bond to a destination, potentially using methods, such as EEG or fMRI, or biometric measures, that complement self-reports.

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