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Eco-Cultural Tourism through Community Participation: Promoting Environmentally Friendly Practices and Cultural Preservation in Prachinburi Province

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ABSTRACT

This study investigates the role of community participation in promoting eco-cultural tourism with a focus on environmentally friendly practices and cultural preservation in Si Maha Phot District, Prachinburi Province, Thailand. Conducted as a cross-sectional survey, the research sampled 400 individuals from a population of 85,988, using Taro Yamane's formula for sample selection. Data collection took place from March 1 to 31, 2024, gathering information on individual demographics, levels of community engagement, eco-cultural tourism knowledge, and perceptions of tourism impacts. Statistical analyses, including frequency, percentage, mean, standard deviation and multi-classification analysis (MCA), explored the relationship between socio-demographic factors and community participation in eco-cultural tourism. The analysis revealed significant overall differences, with an F-value of 14.662 and $p = 0.000$, indicating that the analyzed factors substantially impact eco-friendly tourism development. Age was found to have a highly significant

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effect (F = 37.602, p = 0.000), showing a strong relationship between respondents' age and environmentally friendly tourism development. Additionally, eco-tourism knowledge was significantly influential (F = 7.658, p = 0.006), highlighting the role of awareness in shaping community behavior. Moreover, tourism-derived income significantly influenced eco-friendly tourism development (F = 52.137, p = 0.000), underscoring the economic benefits from tourism in fostering community engagement. Furthermore, significant differences were observed for gender, marital status, education, and community residence, showing statistical significance ($p < 0.05$). Findings underscore the potential of educational and cultural awareness initiatives to enhance community engagement in eco-cultural tourism, suggesting targeted educational efforts as a means for policymakers and stakeholders to foster sustainable tourism practices that respect both the environment and cultural heritage.

Keywords: Eco-Cultural Tourism; Community Participation; Sustainability; Cultural Preservation; Environmentally Friendly Practices

1. Introduction

Tourism is a key driver of global economic growth, showing resilience and recovery after the COVID-19 pandemic. According to the United Nations World Tourism Organization (UNWTO), international tourism receipts reached USD 1.4 trillion in 2023, about 93% of the USD 1.5 trillion recorded in 2019. The number of international tourist arrivals in 2023 was 1.3 billion, representing 88% of pre-pandemic levels (UNWTOa). Tourism accounts for 30% of global service exports and 7% of total exports, contributing around 10% to the world's GDP and supporting one in ten jobs globally (UNWTOb). However, tourism can significantly impact the environment, leading to resource consumption, pollution, habitat degradation, waste generation, and climate change, depending on tourism type and destination [1].

As communities balance environmental sustainability with cultural preservation and economic development, eco-cultural tourism has emerged as a promising strategy. Combining ecotourism with cultural heritage tourism, it benefits both local ecosystems and cultural landscapes, generating economic gains while promoting the preservation of natural and cultural resources. By involving community members in tourism activities such as guiding, hospitality, and cultural exhibitions, the economic benefits are directed to those most affected by tourism. This provides alternative income sources, reducing reliance on unsustainable practices such as poaching, deforestation, and cultural erosion [2,3].

Community-based eco-cultural tourism (CBECT) integrates local communities into tourism management, emphasizing local participation in planning, management, and benefits. This ensures economic and social gains stay within the community while promoting environmental and cultural stewardship [4]. CBECT fosters ownership and responsibility, making tourism practices more sustainable and resilient. This approach aligns with broader goals of environmental conservation, cultural preservation, and socio-economic development [5]. CBECT has also contributed to poverty alleviation, livelihood diversification, and community empowerment [6], as well as ecosystem conservation and economic stability [7].

To strengthen the synergy between ecology and culture, it is crucial to highlight how eco-cultural tourism bridges the gap between environmental conservation and cultural preservation. This synergy enhances tourism sustainability while protecting local traditions, practices, and ecosystems for future generations.

Despite its potential, CBECT faces challenges. Some initiatives fall short in biodiversity conservation and poverty alleviation, offering limited short-term income and struggling with conflicting objectives [8]. Other studies point to governance issues that hinder collaborative relationships and limit community empowerment, impacting CBECT effectiveness [2]. CBECT outcomes are also hard to measure due to a lack of robust data and systematic monitoring, limiting insight into tangible benefits for local communities [8]. Additionally, conflicts between community members and administrative staff in protected areas complicate CBECT implementation, pointing to a need for better participatory management and capacity-building efforts [9,10].

To address these challenges, understanding the at-

titudes and perspectives of community members and administrative staff towards involvement and empowerment is crucial. Insights into these relationships can inform policy adjustments, improve collaborative governance, and strengthen eco-cultural tourism practices that align with conservation and development goals. This study aims to explore eco-cultural tourism through community participation in Prachinburi Province, Thailand, focusing on how environmentally friendly practices and cultural preservation can be promoted through inclusive and sustainable tourism management.

2. Methods

2.1. Study Design and Sample

A cross-sectional survey was conducted among the residents of Si Maha Phot District, Prachinburi Province, totaling 19,164 people [11]. The population of Prachinburi Province is 499,563, with 246,490 males and 253,073 females. In Si Maha Phot District, there are 9354 males and 9810 females. The sample size was determined using Taro Yamane's formula (Yamane, 1973), with a 95% confidence level and a 5% margin of error. This calculation resulted in a sample size of 400 individuals.

Step 1: A sample was selected from residents of Si Maha Phot District, Prachinburi Province, covering 10 sub-districts: Si Maha Phot, Samphan, Ban Tam, Tha Tum, Bang Kung, Dong Krathong Yam, Nong Phrong, Hua Wa, Hat Yang, and Kroak. The selection was based on a representative approach, ensuring diverse participation from each sub-district to capture a broad range of perspectives.

Step 2: The researchers administered an online questionnaire to residents of Si Maha Phot District, Prachinburi Province, with the collaboration of local colleges. Students and faculty members from these institutions assisted in disseminating the questionnaire to the target population, ensuring effective reach within the community. Data collection was conducted from March 1, 2024, to March 31, 2024, with research assistants residing in the area actively supporting the distribution process. This approach helped ensure the attainment of the desired sample size while maintaining a high level of local involvement and engagement in the study.

2.2. Measurement Tool and Variable

Informed consent was obtained on the initial page of the questionnaire, allowing respondents to either consent to or decline participation before proceeding to the subsequent questions. Participants were free to engage in the study or withdraw at any time without justification. All findings from the study are for research purposes only, and personal data confidentiality was maintained.

The self-administered questionnaire comprises four sections. The first section collects individual information, including gender, age, marital status, education, occupation, income, tourism-related income, living expenses, and length of residence in Si Maha Phot District, Prachinburi Province. Gender was coded as 1 for female and 0 for others. Age was recorded on an interval scale, and educational attainment was categorized as high school or lower, diploma/vocational certificate, bachelor's degree, and higher. Household income and living expenses were categorized into various ranges, such as under ฿5000 and ฿5001–฿10,000.

The second section evaluates community participation in the development of environmentally friendly tourist attractions across four dimensions: problem analysis, planning, operational aspects, and benefit sharing, with 20 questions. Respondents indicated their level of agreement on a 6-point Likert scale, from 0 (no involvement) to 5 (highest involvement).

The third section assesses knowledge and understanding of environmentally friendly tourism, with 8 true/false statements. The final section measures community perceptions of tourism impacts (economic, socio-cultural, and environmental) with 20 questions on a 5-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree).

The questionnaire underwent reliability and validity testing. A pilot study with 30 participants resulted in necessary revisions. Cronbach's alpha was 0.763, indicating satisfactory reliability, and content validity was confirmed by a panel of five experts, yielding an IOC score of 0.896.

The study's dependent variable was community participation in eco-tourism development, and the independent variables included socio-demographic factors, knowledge of eco-tourism, and perceptions of tourism impacts.

2.3. Data Analysis

Univariate analysis was conducted using descriptive statistics, including frequency distribution, percentage, mean, median, and standard deviation, to describe both the independent and dependent variables. A bivariate statistical analysis included the independent *t*-test and analysis of variance (ANOVA) were conducted to examine the relationship between socio-demographic factors and community participation in the development of environmentally friendly tourist attractions. The data were analyzed using multi-classification analysis with the SPSS program for Windows. In this analysis, *p*-values less than 0.05 were considered statistically significant.

2.4. Ethical Approval

This research was conducted in accordance with the 1964 Helsinki Declaration and its subsequent amendments. The research ethics were approved by the Ethics Institute for Human Research, College of Medical and Public Health Technology (CMPHT), Faculty of Public Health and Allied Health Sciences, Praboromarajchanok Institute, Ministry of Public Health, Reference No. KMPHT-66010006.

3. Results

Table 1 shows that most respondents are female (68.5%), with 31.5% male. Regarding marital status, 45.5% are married, 43.5% are single, and 11.0% are divorced, separated, or widowed. The largest educational group holds a diploma or vocational certificate (47.5%), followed by those with a high school education or lower (29.0%). Fewer respondents have bachelor's degrees (18.5%), master's degrees (1.0%), or other qualifications (4.0%). Occupation-wise, factory/private company employees (29.0%) and general laborers (26.0%) are most common. Monthly income data indicates that most earn between 5,001 and 10,000 Baht (28.5%), with 96.0% earning up to 5000 Baht from tourism. In terms of expenses, 52.0% spend between 5001 and 10,000 Baht per month. A majority (87.0%) have lived in their community for more than five years.

Table 1. Descriptive analysis and bivariate analysis of variables.

Factor	Frequency	Percent	Participation of the Community Mean (SD)	t-test/f-test (*p*-value)
Gender				
Male	126	31.5	0.70 (0.91)	−0.457 (0.648)
Female	274	68.5	0.75 (0.78)	
Marital Status				
Single	174	43.5	0.53 (0.64)	14.812 (0.000**)
Married	182	45.5	0.81 (0.80)	
Divorced/Separated/Widowed	44	11.0	1.21 (1.24)	
Education				
High school or below	116	29.0	0.92 (1.10)	6.074 (0.000**)
Vocational diploma	190	47.5	0.64 (0.64)	
Bachelor's degree	74	18.5	0.65 (0.72)	
Master's degree	4	1.0	2.23 (0.09)	
Others	16	4.0	0.54 (0.26)	
Occupation				
Farmer	22	5.5	0.55 (0.81)	8.622 (0.000**)
Government employee/State enterprise employee	24	6.0	1.19 (1.06)	
General laborer	104	26.0	0.61 (0.79)	
Factory worker/Private company employee	116	29.0	0.45 (0.20)	
Student	16	4.0	0.54 (0.26)	
Trader/Self-employed	72	18.0	1.08 (0.91)	
Others	46	11.5	1.09 (1.25)	

Table 1. *Cont.*

Factor	Frequency	Percent	Participation of the Community Mean (SD)	t-test/f-test (*p*-value)
Monthly Income				
Not more than 5,000 THB	60	15.0	0.66 (0.51)	6.191 (0.000**)
5,001 – 10,000 THB	114	28.5	1.02 (1.22)	
10,001 – 15,000 THB	106	26.5	0.52 (0.41)	
15,001 – 20,000 THB	76	19.0	0.74 (0.75)	
More than 20,001 THB	44	11.0	0.56 (0.47)	
Income from Tourism				
Not more than 5,000 THB	384	96.0	0.66 (0.74)	50.158 (0.000**)
5,001 – 10,000 THB	14	3.5	2.67 (0.72)	
10,001 – 15,000 THB	2	0.5	0.30 (0.00)	
15,001 – 20,000 THB	-	-	-	
More than 20,001 THB	-	-	-	
Expenses				
Not more than 5,000 THB	50	12.5	0.68 (0.56)	2.042 (0.088)
5,001 – 10,000 THB	208	52.0	0.78 (0.95)	
10,001 – 15,000 THB	52	13.0	0.60 (0.49)	
15,001 – 20,000 THB	64	16.0	0.59 (0.47)	
More than 20,001 THB	26	6.5	1.05 (1.17)	
Length of Residence in the Community				
Less than 1 year	10	2.5	0.56 (0.20)	1.465 (0.224)
1-3 years	24	6.0	0.64 (0.63)	
4-5 years	18	4.5	1.10 (1.37)	
More than 5 years	348	87.0	0.73 (0.81)	

Note: **significant level 0.01, *significant level 0.05.

The analysis of factors influencing community participation in environmentally friendly tourism development reveals several trends. Gender differences were negligible, but marital status significantly impacted participation, with divorced, separated, or widowed individuals showing the highest involvement, followed by married individuals. Surprisingly, those with a Master's degree displayed the highest participation, contrary to expectations. Occupation also played a role, with government employees and self-employed individuals showing greater involvement. Income levels impacted participation, with those earning between 5001 to 10,000 Baht from tourism showing the most engagement. Length of residence in the community also mattered, with individuals living there for 4–5 years being most involved.

The statistical analysis, including *t*-test/f-test results, showed that participation did not significantly differ by gender ($p = 0.648$), expenses ($p = 0.088$), or length of residence ($p = 0.224$). However, marital status ($p < 0.01$) and education level ($p < 0.01$) had significant effects. Occupation ($p < 0.01$) also showed differences, with farmers participating less than government employees and self-employed individuals. Income level and tourism-related income both significantly impacted participation ($p < 0.01$).

Table 2 presents the age range of respondents, spanning from 18 to 87 years, with an average age of 41.29 and a standard deviation of 12.07, indicating a broad age distribution. The overall mean score for community participation in environmentally friendly tourism development in Amphoe Sri Maha Phot, Prachinburi Province, is 0.73, with a standard deviation of 0.82. Among the various aspects, problem analysis and planning had a low mean score of 0.28 (SD = 0.84), while operational execution scored higher with a mean of 1.29 (SD = 1.21). Benefit sharing had a mean score of 1.16 (SD = 1.07), and follow-up had the lowest mean at 0.21 (SD = 0.77). Knowledge and understanding of environmentally friendly tourism were high, with a mean score of 14.70 out of 16 (SD = 1.87). Community perception of the economic impact had a mean of 4.13 (SD = 0.70), indicating high awareness. Awareness of social-cultural impact had a mean of 3.97 (SD = 0.81), while environmental impact awareness had a mean of 3.90 (SD = 0.85). These findings offer insights into community engagement and perception regarding eco-friendly tourism development in the region.

Table 2. Minimum, maximum, mean, and standard division of variables.

	Min	Max	Mean	SD.
Age	18.00	87.00	41.29	12.07
Knowledge of environmentally friendly tourism development	0.00	16.00	14.70	1.87
The community awareness				
the economic impact of tourism on the community	2.00	5.00	4.13	0.70
the socio-cultural impact of tourism on the community	1.40	5.00	3.97	0.81
the environmental impact of tourism on the community	1.43	5.00	3.90	0.85
Overall community awareness				
The community participation				
Problem analysis and planning	0.00	4.00	0.28	0.84
Implementation	0.00	5.00	1.29	1.21
Benefit sharing and distribution	0.00	5.00	1.16	1.07
Monitoring	0.00	4.00	0.21	0.77
Overall community participation	0.00	4.25	0.73	0.82

Table 3 presents the overall model, showing factors influencing public participation in tourism development. The F-value of 14.662 (Sig. = 0.000) indicates that the combined factors significantly impact participation. Age has a highly significant effect (Sig. = 0.000, F-value = 37.602), suggesting participation levels vary across age groups. Knowledge of environmentally friendly tourism significantly influences participation (Sig. = 0.006), with greater understanding leading to higher involvement. Income from tourism also shows a strong and significant effect (Sig. = 0.000), indicating those earning from tourism are more likely to participate. Marital status (Sig. = 0.046) and education (Sig. = 0.004) are significant, with higher education levels and marital status influencing participation. However, community perceptions of tourism's economic, social, cultural, and environmental impacts do not significantly affect participation (Sig. = 0.304, 0.302, 0.485). Monthly income shows a marginal non-significant effect (Sig. = 0.106), while gender does not significantly affect participation (Sig. = 0.427). Living in the community shows a borderline effect (Sig. = 0.078), suggesting it may influence participation, but not strongly.

Table 3. Hierarchical Analysis of Factors Influencing Public Participation in Tourism Development.

Hierarchical Method					
	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
(Combined)	53.977	7	7.711	14.662*	0.000
Age	19.775	1	19.775	37.602*	0.000
Knowledge and understanding of environmentally friendly tourism development	4.027	1	4.027	7.658*	0.006
Community perception of the economic impact of tourism on the community	0.556	1	0.556	1.058	0.304
Community perception of the social and cultural impact of tourism on the community	0.562	1	0.562	1.068	0.302
Community perception of the environmental impact of tourism on the community	0.257	1	0.257	0.489	0.485
Monthly income	1.381	1	1.381	2.625	0.106
Income from tourism	27.419	1	27.419	52.137*	0.000
(Combined)	15.278	10	1.528	2.905*	0.002
Gender	0.333	1	0.333	0.633	0.427
Marital status	3.257	2	1.628	3.096*	0.046
Education	8.080	4	2.020	3.841*	0.004
Living in the community	3.609	3	1.203	2.287	0.078
Model	69.255	17	4.074	7.746*	0.000
Residual	200.892	382	0.526		
Total	270.148	399	0.677		

Note: *p-value < 0.005.

Table 4 highlights the key factors influencing community participation in tourism development. Education and marital status are the most significant, with education showing a strong impact. The Eta value of 0.241 and Beta of 0.184 indicate that individuals with higher education are more likely to engage in tourism development. Marital sta-

tus also plays a role, with an Eta of 0.264 and Beta of 0.117, suggesting a moderate influence on participation. In contrast, gender shows minimal impact, with an Eta of 0.023 and Beta of 0.048, indicating little effect on participation.

Table 4. Multiclassification analysis (MCA) predicting public participation in tourism development.

		N	Predicted Mean		Deviation		ETA	BETA
			Unadjusted	Adjusted for Factors and Covariates	Unadjusted	Adjusted for Factors and Covariates		
Gender	Male	126	0.705	0.674	−0.028	−0.058	0.023	0.048
	Female	274	0.745	0.759	0.013	0.027		
Marital status	Single	174	0.526	0.662	−0.206	−0.071	0.264	0.117
	Married	182	0.813	0.739	0.081	0.006		
	Divorced/Separated/ Widowed	44	1.214	0.986	0.481	0.254		
Education	High school or below	116	0.916	0.785	0.184	0.053	0.241	0.184
	Vocational diploma	190	0.635	0.671	−0.097	−0.061		
	Bachelor's degree	74	0.654	0.686	−0.078	−0.047		
	Master's degree	4	2.225	2.061	1.493	1.329		
	Other	16	0.544	0.960	−0.189	0.228		
Living in the community	Less than 1 year	10	0.560	0.956	−0.172	0.224	0.105	0.119
	1–3 years	24	0.638	0.751	−0.095	0.018		
	4–5 years	18	1.100	1.142	0.367	0.409		
	Over 5 years	348	0.725	0.704	−0.008	−0.029		

Regarding gender, male participants (126 individuals) have an unadjusted mean of 0.705, decreasing slightly to 0.674 after adjustment, showing minimal change. Female participants (274 individuals) show a slight increase in their mean from 0.745 to 0.759. Both show very small effects in Eta and Beta values.

Marital status significantly influences participation. Single participants (174 individuals) show a considerable increase in participation from 0.526 to 0.662 after adjustment. Married participants (182 individuals) show minimal change, with a slight decrease from 0.813 to 0.739. Divorced, separated, or widowed participants (44 individuals) exhibit a notable increase in participation, from 1.214 to 0.986, reflecting the strong impact of marital status.

Education also plays a key role in participation. Participants with high school education or below (116 individuals) show a decrease in participation from 0.916 to 0.785. Those with a vocational diploma (190 individuals) show a slight increase from 0.635 to 0.671. Bachelor's degree holders (74 individuals) show a minimal increase from 0.654 to 0.686. Those with a Master's degree (4 individuals) show a substantial decrease from 2.225 to 2.061, though the small sample size reduces the reliability of this result.

Community residency influences participation. Participants who have lived in the community for less than 1 year (10 individuals) show a significant increase in participation, from 0.560 to 0.956. Those who have lived in the community for 1–3 years (24 individuals) show a modest increase, from 0.638 to 0.751. Longer residency (over 5 years, 348 individuals) shows minimal change in participation, from 0.725 to 0.704.

In summary, education and marital status are the most influential factors, with education having a substantial impact. Gender has minimal effect, and community residency shows a moderate impact, with longer periods of residency generally increasing participation.

4. Discussion

The findings revealed the significant positive association between knowledge of environmentally friendly tourism and community participation observed in our study, which aligns with findings from existing research

in the field. Numerous studies have emphasized the pivotal role of education and awareness in driving community engagement in sustainable tourism initiatives, particularly those focused on environmental conservation and responsible tourism practices [9,10]. Our findings underscore the importance of educational interventions and awareness campaigns aimed at fostering community understanding of eco-friendly tourism principles and their benefits. This aligns with the recommendations of scholars who have advocated for the implementation of educational programs targeting residents of tourism destinations to enhance their knowledge and appreciation of sustainable tourism practices [12,13]. Moreover, the positive association between knowledge of environmentally friendly tourism and community participation highlights the potential efficacy of community-based educational initiatives in promoting sustainable tourism development. Research has shown that community engagement in educational programs and capacity-building activities can empower local residents to actively participate in decision-making processes related to tourism development and conservation efforts [14].

To strengthen the analysis of the synergy between ecology and culture, it is essential to highlight how knowledge of environmentally friendly tourism can enhance the connection between cultural heritage and ecological conservation. By emphasizing the cultural significance of environmental stewardship, such initiatives can foster a deeper understanding and respect for both the natural and cultural landscapes of tourism destinations. This synergy can further encourage community participation in sustainable tourism practices, aligning with the broader goals of preserving cultural identity while promoting environmental sustainability [15].

The lack of significant relationships between community participation and the economic, socio-cultural, and environmental impacts of tourism suggests that these factors may not directly influence individuals' willingness to engage in eco-friendly tourism development initiatives. One possible explanation is the multifaceted nature of community participation in tourism. While economic factors such as income from tourism are often seen as key drivers of involvement [16], our results indicate that these factors alone may not be sufficient. This highlights the need to consider additional factors like community empowerment, social cohesion, and governance structures, which may play a more pivotal role in shaping participation [17]. The lack of significant associations between community participation and socio-cultural and environmental impacts emphasizes the complexity of community perceptions and priorities in tourism destinations.

Our findings underscore the importance of adopting a holistic, context-specific approach to community participation in sustainable tourism. Rather than focusing solely on economic, socio-cultural, or environmental factors, policymakers and tourism stakeholders should consider social capital, trust, empowerment, and participatory decision-making [17,18]. Addressing these broader factors can foster more inclusive, resilient, and sustainable tourism development practices that benefit both residents and visitors. Furthermore, the significant negative association between monthly income and community participation highlights socio-economic disparities, with higher-income individuals less inclined to participate in eco-friendly tourism initiatives. This suggests the importance of addressing financial barriers to participation through targeted interventions. Research indicates that lower-income residents often face barriers like financial constraints, time limitations, or competing priorities, making participation in tourism development more difficult [19]. Higher-income individuals, with greater discretionary resources, are better positioned to engage in community initiatives.

This negative association may also reflect socio-economic exclusion, where lower-income residents are marginalized in decision-making processes related to tourism development [19]. In contrast, higher-income residents, with greater social capital, networks, and influence, are more likely to shape tourism policies. To address these inequalities, destination planners and policymakers should create inclusive participation mechanisms, such as financial assistance or capacity-building programs, to accommodate the diverse needs of all community members. This will enhance the legitimacy, sustainability, and social benefits of tourism initiatives, promoting social justice and community well-being [20].

5. Conclusion and Suggestions

This study highlights the dynamics of communi-

ty participation in the development of environmentally friendly tourist attractions. A significant positive correlation was found between knowledge of environmentally friendly tourism and community engagement, emphasizing the role of education and awareness in promoting sustainable tourism practices. However, the lack of significant relationships between community involvement and the economic, socio-cultural, and environmental impacts of tourism suggests that other factors may influence participation. Additionally, the negative association between monthly income and community engagement underscores the need to address socio-economic disparities to ensure inclusive participation [15].

To strengthen the synergy between ecology and culture, eco-friendly tourism should enhance the connection between cultural heritage and ecological conservation. By integrating cultural elements into tourism development, this synergy fosters a deeper understanding of the local environment and cultural significance, encouraging greater community involvement in sustainability efforts. This approach promotes mutual respect for both the natural environment and cultural traditions, reinforcing the importance of preserving both for future generations [16].

To effectively promote sustainable eco-cultural tourism, targeted education and awareness campaigns are crucial. Programs could include workshops on sustainable use of resources such as native plants and traditional farming methods, while also emphasizing cultural significance. These programs should show how sustainable tourism can support both cultural and environmental conservation. Collaboration between schools, community centers, and local institutions could provide resources that highlight the interconnectedness of culture and the environment, fostering stewardship among residents [19].

Community-based initiatives should be developed to protect cultural heritage alongside environmental conservation. For example, cultural heritage tourism routes could protect endangered ecosystems while promoting conservation and cultural preservation. Eco-cultural tours could integrate indigenous knowledge about local flora and fauna, highlighting conservation practices. Additionally, funding should be allocated to preserving traditional architecture, craftsmanship, and agricultural practices, ensuring both environmental sustainability and cultural identity are upheld [7].

Capacity-building programs are essential to equip community members with the skills to manage conservation projects and cultural heritage sites. Local tour guides could be trained to share the cultural and ecological significance of natural landmarks responsibly [20]. Developing vocational programs that combine environmental sciences and cultural studies would enable residents to engage in eco-tourism ventures, such as guided tours, sustainable farming, and local craft production. To address socio-economic disparities and foster inclusive participation, financial assistance programs should be created for lower-income residents. Subsidies could support participation in eco-cultural tourism training or provide financial aid to craftspeople selling goods via eco-tourism platforms. A "community share" model, where profits from eco-tourism are reinvested into the community to fund infrastructure, health services, and education, ensures that all community members benefit from tourism development [7].

Governance models should emphasize collaboration and multi-stakeholder platforms, bringing together community leaders, government, businesses, and experts [7]. These platforms enable shared decision-making, ensuring that both cultural and ecological considerations are integrated into tourism policies. Promoting community-based governance structures allows residents to participate in planning, management, and decision-making processes, ensuring respect for cultural and ecological heritage. Finally, robust monitoring and evaluation mechanisms should track both ecological and cultural impacts of tourism [20]. Regular assessments of biodiversity, cultural heritage preservation, and community satisfaction are essential. Engaging local communities in these efforts will increase their sense of ownership and responsibility for preserving natural and cultural resources. Data from these systems should be used to adapt tourism policies, ensuring sustainable tourism development that balances ecological and cultural preservation [18].

6. Limitations

As a result, the sample may not be evenly distributed across different age groups. This is a limitation of the study, as it may affect the generalizability of the findings

across age demographics. The authors acknowledge this limitation and suggest that future studies should define age groups more explicitly to provide a clearer understanding of age-related differences in the findings. By doing so, the study could offer more detailed insights into how various age categories perceive and participate in the survey [14]. Moreover, future research could integrate novel theoretical frameworks that explore the interdisciplinary relationship between tourism, sustainability, and community engagement. Additionally, incorporating mixed methods—combining qualitative interviews and quantitative surveys—would provide a more holistic understanding of community perceptions. Expanding the scope to include comparative analysis between different regions or case studies would also contribute new insights into the effectiveness of eco-cultural tourism initiatives across diverse contexts [16].

Moreover, by addressing gaps in the existing literature and focusing on under-researched areas such as long-term socio-cultural impacts or the role of modern technology in eco-tourism, future studies can provide fresh academic perspectives. Lastly, emphasizing practical contributions through clear recommendations for policymakers and tourism managers can make the research more relevant to real-world applications.

Author Contributions

I.S. contributed to the conceptualization of the study, the analysis of the data, and the writing of the manuscript. P.T. led the literature review and revision of the manuscript, and was responsible for the overall coordination of the study. U.A. assisted with data collection and the literature review. A.H. contributed to the writing and editing of the manuscript and provided assistance with the study's administrative tasks. All authors have read and agreed to the published version of the manuscript.

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Institutional Review Board Statement

This research was conducted in accordance with the 1964 Helsinki Declaration and its subsequent amendments. The research ethics were approved by the Ethics Institute for Human Research, College of Medical and Public Health Technology (CMPHT), Faculty of Public Health and Allied Health Sciences, Praboromarajchanok Institute, Ministry of Public Health, Reference No. KMPHT-66010006.

Informed Consent Statement

Not applicable.

Data Availability Statement

The data presented in this study are available on request from the corresponding author.

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Conflicts of Interest

The authors declare no conflict of interest.

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