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ENVIRONMENTAL SENSITIVITY TRAINING EFFECT ON SRI LANKAN TOUR GUIDES PRO-WILDLIFE BEHAVIOURS: MEDIATOR ROLE OF WORK ENGAGEMENT

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Abstract

This study investigates the effectiveness of environmental sensitivity training (EST) in fostering pro-wildlife behaviours (WB) among tour guides in Sri Lanka, and explores the mediating role of work engagement (WE) in this relationship. The study aims to contribute to both tourism practice and wildlife conservation in Sri Lanka by providing evidence-based recommendations for training program design, policy development, and conservation efforts. Using a quantitative research design researcher used online surveys to collect data from 357 tour guides operating in wildlife-rich areas across Sri Lanka using Purposive Sampling Technique. The survey measures participants' exposure to EST programs, their levels of WE, and their engagement in specific WB that contribute to wildlife conservation. The data is analysed using confirmatory factor analysis (CFA) and structural equation modelling (SEM) to test the hypothesized relationships between the variables. The results reveal a positive effect of EST on WB, mediated by WE. Specifically, the findings indicate that EST programs enhance WE among tour guides, which in turn leads to increased adoption of pro-wildlife behaviours. The results also show that EST programs incorporating immersive nature experiences, personal development activities, and career development opportunities have a stronger impact on WE and WB. Moreover, this study provides valuable insights for the development of more targeted and impactful training programs for tour guides in Sri Lanka. By incorporating strategies to enhance both environmental sensitivity and work engagement, training programs can empower tour guides to act as responsible stewards of wildlife and influence tourist behaviour. The study also provides evidence-based suggestions for policymakers to formulate regulations and incentives that promote responsible tourism practices among tour operators and guides. Furthermore, the study demonstrates how empowering tour guides as ambassadors for wildlife conservation can foster a collective sense of responsibility for protecting Sri Lanka's natural treasures.

Keywords: *Environmental Sensitivity Training; Pro-Wildlife Behaviors; Work engagement; Tour Guides; Wildlife Conservation*

Introduction

Sri Lanka, a biodiversity hotspot nestled in the Indian Ocean, captivates the world with its natural splendour. Elephants, leopards, and whales are among the diverse wildlife that inhabit its verdant jungles, ancient ruins, and sapphire seas. However, this tropical paradise faces a stark reality: unsustainable

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tourism practices threaten the delicate balance of its ecosystems (Macdonald, 2023). How can researchers protect this precious heritage? This research proposes a novel solution: nurturing a new breed of guardians, tour guides imbued with environmental sensitivity, who can shape pro-wildlife behaviours among tourists. To achieve this goal, researchers explore the transformative potential of Environmental Sensitivity Training (EST) and the mediating role of work engagement in influencing tour guides' actions.

Tourism is a cornerstone of Sri Lanka's economy, generating vital revenue and fostering cultural exchange. However, its unbridled growth often comes at the expense of wildlife welfare and habitat degradation (Gunaratna, 2018). Uninformed visitors pose various threats to the environment, such as inappropriate tourist conduct, habitat encroachment, and irresponsible waste disposal (Tan, 2022). Recognizing this critical juncture, researchers and policymakers emphasize the need for responsible tourism practices, advocating for environmentally conscious travel choices and fostering a sense of stewardship among tourism stakeholders (Hossen, 2023).

While various initiatives promote sustainable tourism in Sri Lanka, the effectiveness of tour guide training in fostering pro-wildlife behaviours remains underexplored. Existing training programs often lack a structured approach to environmental sensitivity, focusing primarily on technical skills or cultural knowledge (Fernández-Llamazares et al., 2020). This gap hinders the development of tour guides as advocates for conservation, limiting their ability to influence tourist behaviour and protect wildlife (Marasinghe, Perera, Simpson, & Newsome, 2021). Furthermore, traditional training programs rarely consider the crucial role of work engagement in influencing pro-wildlife actions. Studies suggest that engaged employees display higher levels of environmental commitment and pro-environmental behaviours (Massingham, Fuller, & Dean, 2019), highlighting the potential of fostering engagement as a key lever for behavioural change.

To address the gap in the literature on the effectiveness of tour guide training in fostering pro-wildlife behaviours, this research investigates two research questions. The first question examines the relationship between Environmental Sensitivity Training (EST) and Tour guides Pro-Wildlife Behaviours (WB) in Sri Lanka. The second question explores how Work Engagement (WE) mediates this relationship. By answering these questions, this research aims to contribute to both tourism practice and wildlife conservation in Sri Lanka.

This research has significant implications for the development of more targeted and impactful training programs for tour guides. By examining the effectiveness of EST in shaping pro-wildlife behaviours and identifying the mediating role of work engagement, researchers provide valuable insights for training program design, policy development, and conservation efforts. Specifically, researchers suggest that incorporating environmental sensitivity modules and strategies to cultivate work engagement can enhance the effectiveness of tour guide training programs. Researchers also provide evidence-based recommendations that can guide policymakers in formulating regulations and incentives that promote responsible tourism practices among tour operators and guides. Furthermore, researchers demonstrate how empowering tour guides as ambassadors for wildlife conservation can foster a collective sense of responsibility for protecting Sri Lanka's natural treasures. Therefore, this research paves the way for a future where Sri Lanka's vibrant tourism industry thrives in harmony with its precious wildlife.

Literature Review

Environmental Sensitivity Training in Wild Life Tourism

Wildlife tourism, while offering economic benefits and cultural exchange, can

inadvertently disrupt fragile ecosystems and harm animal welfare. Responsible tour guides play a crucial role in minimizing these impacts, and environmental sensitivity training (EST) emerges as a promising tool to equip them with the knowledge and skills to navigate responsible wildlife encounters (Prakash et al., 2019). Therefore, this section of the literature review delves into the existing research on EST in wildlife tourism, focusing specifically on its potential impact on tour guide pro-wildlife behaviours (WB). Researchers will explore the theoretical underpinnings of EST, examine global and Sri Lankan perspectives on its effectiveness, and identify research gaps that necessitate further investigation.

Sri Lanka, renowned for its rich biodiversity and thriving wildlife tourism industry, faces unique challenges in balancing visitor experience with wildlife conservation. The increasing pressure on endangered species like Asian elephants and leopards underscores the need for tour guides to be active stewards of these natural treasures (Kanesh, 2021). A study by Sumanapala & Wolf (2020) in Sri Lanka revealed that tour guides with higher ecological knowledge exhibited more responsible wildlife viewing behaviours. This suggests that EST, which aims to enhance such knowledge, could offer a promising solution. Furthermore, an evaluation of a pilot EST program conducted in Sri Lanka reported a positive shift in tour guide attitudes towards wildlife after undergoing the training (Landstrom, 2006). These initial findings from Sri Lanka align with the global trends observed, offering potential for further research and implementation of EST programs tailored to the local context. Some argue that EST alone may not be sufficient to change deeply ingrained behaviours or address systemic issues within the tourism industry. Additional factors like economic pressures, inadequate enforcement of regulations, and limited alternative livelihoods for guides can impede the translation of knowledge into action (Karunananda & Gunawardena, 2023). Recognizing these limitations is crucial for designing comprehensive interventions that go beyond EST to create a supportive environment for pro-wildlife behaviours among tour guides.

While existing research indicates a positive association between EST and WB, specific aspects of EST program design and delivery remain understudied. Identifying the most effective training methods, content areas, and duration of programs for optimizing impact in the Sri Lankan context is crucial. Addressing these gaps can empower Sri Lanka's wildlife tourism industry to foster responsible visitor behaviour, minimize ecological harm, and contribute to long-term sustainability for both wildlife and local communities (Zoysa, 2022). By examining the effectiveness of different EST approaches and understanding the mediating factors influencing WB adoption, researchers can refine research question and develop a more nuanced understanding of how EST can best contribute to responsible wildlife tourism practices in Sri Lanka.

Environmental sensitivity training emerges as a valuable tool for equipping tour guides with the knowledge and skills to act as responsible stewards of wildlife and ecosystems. Existing research suggests a positive association between EST and pro-wildlife behaviours, but further investigation is needed to optimize program design and assess its effectiveness within the specific context of Sri Lanka's wildlife tourism industry. Bridging these research gaps will pave the way for evidence-based interventions that promote responsible tourism practices and ensure the sustainability of Sri Lanka's natural treasures for generations to come.

Work Engagement and Pro-Wildlife Behaviours in Wild Life Tourism

Beyond technical skills and ecological knowledge, tour guides in wildlife tourism require a strong emotional connection to their work and the environment to translate responsible practices into action (Lee, Jan, & Chen, 2023). This connection, often termed

work engagement, emerges as a crucial factor influencing pro-wildlife behaviours (WB). Investigating the link between these two concepts within the context of wildlife tourism is central to promoting responsible visitor experiences and safeguarding wildlife welfare. Therefore, this section delves into the existing research exploring the relationship between work engagement and pro-wildlife behaviours among tour guides. Researchers will examine the theoretical underpinnings of both concepts, analyse their interplay in the global and Sri Lankan contexts, and identify research gaps that necessitate further investigation.

Sri Lanka's rich biodiversity and thriving wildlife tourism industry call for dedicated tour guides who act as responsible stewards of its natural treasures. However, factors like challenging work conditions, low wages, and limited career progression opportunities can undermine work engagement and consequently, the adoption of pro-wildlife behaviours (Kalpage, 2013). A study by Prakash et al. (2019) in Sri Lanka revealed a positive correlation between job satisfaction, an indicator of work engagement, and responsible wildlife viewing practices among tour guides. This suggests that fostering engagement through improved working conditions and career development opportunities could potentially motivate responsible wildlife tourism practices. Some argue that factors beyond individual engagement, such as inadequate regulatory frameworks, lack of enforcement, and limited community involvement, play a more significant role in shaping pro-wildlife behaviours (de Silva et al., 2023). Recognizing these systemic limitations is crucial for designing comprehensive interventions that go beyond individual engagement to create a conducive environment for responsible wildlife tourism in Sri Lanka.

While existing research suggests a link between work engagement and WB, the specific characteristics and interventions that foster engagement among tour guides in Sri Lanka remain understudied. Identifying the most effective strategies for enhancing engagement within the local context is crucial. Addressing these gaps can inform interventions to boost work engagement among Sri Lankan tour guides, empowering them to become champions for wildlife conservation and promote responsible tourism practices (Jayasinghe & Wickramasinghe, 2011). This, in turn, can contribute to the sustainability of Sri Lanka's precious wildlife resources and enhance the visitor experience. By examining the specific drivers and determinants of work engagement among Sri Lankan tour guides, researchers can refine research question and develop a more nuanced understanding of how engagement mediates the relationship between environmental sensitivity training and pro-wildlife behaviours in this context.

Work engagement holds significant potential for influencing pro-wildlife behaviours among tour guides in wildlife tourism. Understanding the global and Sri Lankan perspectives on this link, along with acknowledging existing research gaps, paves the way for interventions that foster engaged guides and promote responsible wildlife tourism practices. By prioritizing both work engagement and environmental sensitivity training, researchers can ensure that Sri Lanka's tourism industry thrives in harmony with its natural wonders and inspires future generations to appreciate and protect its unique wildlife heritage.

Environmental Sensitivity Training and Work Engagement

While environmental sensitivity training (EST) equips tour guides with the knowledge and skills to navigate responsible wildlife encounters, translating this knowledge into action requires a deeper connection to their work (Ferguson & Turbyfill, 2013). Work engagement, characterized by vigour, dedication, and absorption in one's tasks, emerges as a crucial link, potentially bridging the gap between training and pro-environmental behaviours. Understanding the relationship between EST and work

engagement within the context of wildlife tourism is essential for maximizing the impact of training programs and fostering responsible interactions with wildlife. Therefore, this section delves into the existing research exploring the link between EST and work engagement among tour guides in wildlife tourism. Researchers will examine the theoretical underpinnings of both concepts, analyse their interplay in the global and Sri Lankan perspectives, identify research gaps, and highlight the significance of investigating this relationship within Sri Lanka's vibrant wildlife tourism industry.

In Sri Lanka, where tour guides navigate challenging work conditions, limited career progression opportunities, and competing economic pressures, fostering work engagement becomes crucial for promoting responsible wildlife tourism practices (Sandaruwani & Gnanapala, 2016). EST programs aimed at enhancing job satisfaction, providing opportunities for skill development, and fostering a sense of belonging within the wildlife tourism community can potentially lead to increased engagement and commitment to responsible wildlife encounters. A study by Prakash et al. (2019) in Sri Lanka revealed a positive correlation between job satisfaction, an indicator of work engagement, and responsible wildlife viewing practices among tour guides. This suggests that EST programs incorporating strategies to address job satisfaction and motivation through improved working conditions and capacity building may have a stronger impact on pro-wildlife behaviours in the Sri Lankan context. Some argue that systemic factors like inadequate regulatory frameworks, limited community involvement, and economic pressures outside the tourism industry significantly influence wildlife protection and responsible tourism practices (Prakash et al., 2019). While acknowledging these external factors, investigating the relationship between EST and work engagement offers valuable insights into individual motivators and their potential to drive responsible behaviours within the tour guide community.

The link between environmental sensitivity training and work engagement presents a promising avenue for maximizing the impact of EST programs in Sri Lanka's wildlife tourism industry. Understanding the global and Sri Lankan perspectives on this relationship, along with addressing existing research gaps, paves the way for designing interventions that not only equip tour guides with knowledge but also nurture their passion and commitment to responsible wildlife encounters. By prioritizing both EST and work engagement strategies, researchers can ensure that Sri Lanka's thriving wildlife tourism industry thrives alongside a dedicated and environmentally conscious workforce, safeguarding its natural wonders for generations to come.

Tour Guide Engagement on Pro Wild -Life Behaviours

Beyond knowledge and technical skills, tour guide engagement emerges as a crucial factor influencing pro-wildlife behaviours (WB) in wildlife tourism. When guides feel passionate, committed, and absorbed in their work, they go beyond simply conveying information, actively promoting responsible interactions with wildlife and advocating for its conservation (Mellish et al., 2021). Understanding the nuances of this relationship between engagement and WB in the context of Sri Lankan wildlife tourism is essential for maximizing the impact of guide training and ensuring the sustainability of its natural treasures. Therefore, this section delves into the existing research exploring the link between tour guide engagement and WB in wildlife tourism. Researchers will examine the multifaceted concept of engagement, analyse its interplay with pro-wildlife actions, explore the global and Sri Lankan perspectives on this link, identify research gaps, and highlight the significance of investigating this relationship within the Sri Lankan context.

In Sri Lanka, where unique wildlife encounters coexist with challenges like limited career opportunities and resource constraints, tour guide engagement plays a critical role in motivating responsible practices (Kalpage, 2013). Engaged guides are more likely to go the extra mile, prioritizing wildlife welfare even amidst difficulties, minimizing disturbance, and promoting visitor awareness. A study by Buultjens, Ratnayake, & Gnanapala (2017) in Sri Lanka revealed a positive correlation between job satisfaction, an indicator of engagement, and responsible wildlife viewing practices among tour guides. This suggests that addressing factors influencing engagement, such as improved working conditions and career development opportunities, could potentially strengthen the adoption of pro-wildlife behaviours in Sri Lanka. Some argue that systemic factors like inadequate regulations, limited community involvement, and economic pressures outside the tourism industry significantly influence wildlife protection and responsible tourism practices (Jamal & Stronza, 2009). While acknowledging these broader issues, investigating the link between engagement and WB offers valuable insights into individual motivators and their potential to drive responsible behaviours within the tour guide community.

Tour guide engagement holds immense potential for influencing pro-wildlife behaviours in Sri Lankan wildlife tourism. Understanding the global and Sri Lankan perspectives on this link, along with addressing existing research gaps, paves the way for designing interventions that not only equip guides with knowledge but also nurture their passion and commitment to responsible wildlife encounters. By prioritizing both engagement and pro-wildlife behaviour strategies, researchers can ensure that Sri Lanka's thriving wildlife tourism industry thrives alongside a dedicated and environmentally conscious workforce, safeguarding its natural wonders for generations to come.

Conceptual Framework and Hypothesis

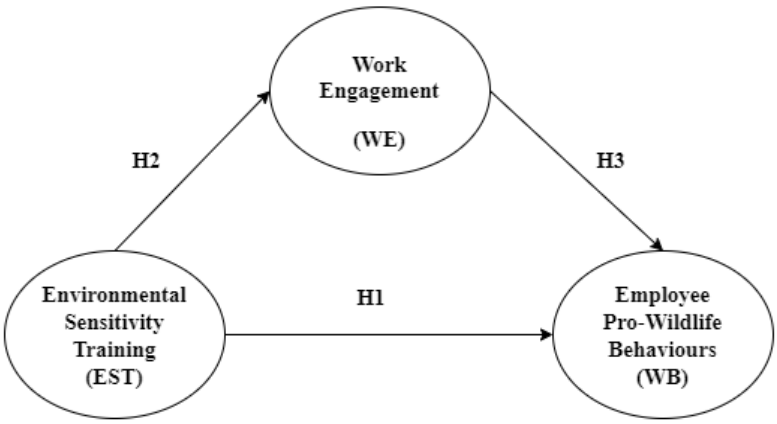

Figure 1: Conceptual Framework

Hypothesis

H1: There is a positive effect of Environmental Sensitivity Training on Tour Guides Pro-Wildlife Behaviours

H2: There is a positive effect of Environmental Sensitivity Training on Work Engagement

H3: There is a positive effect of Work Engagement on Tour Guides Pro-Wildlife Behaviours

Methodology

Research Design

This study employs a quantitative research design to investigate the complex interplay between environmental sensitivity training (EST), work engagement (WE), and pro-wildlife behaviours (WB) in Sri Lankan tour guides. This design offers several advantages for addressing the research questions. Firstly,

quantitative methods excel at testing hypothesized causal relationships between variables (Bryman, 2016). This aligns perfectly with the study's aim to examine the effect of EST on WB, mediated by WE. Path analysis and other statistical techniques allow for rigorous tests of these hypothesized relationships, providing greater insight into the causal mechanisms at play. Secondly, employing a representative sample from the population of Sri Lankan tour guides allows for broader generalizations of the findings beyond the immediate study sample (Babbie, 2010). This is crucial, as understanding how EST and WE influence tour guide behaviour can have tangible implications for wildlife conservation efforts across the country. Finally, quantitative methods, such as online surveys, facilitate standardized data collection across a large sample, enhancing objectivity and internal validity (Oppenheim, 2000). This minimizes researcher bias and ensures the data's consistency and reliability, leading to more robust and trustworthy conclusions. Focusing on the individual tour guide as the unit of analysis allows the research to delve deeper into how personal characteristics and experiences like EST participation and work engagement shape pro-wildlife behaviours. This individual-level perspective provides valuable insights into the motivations and internal processes driving environmental advocacy among tour guides. While online surveys offer a convenient and efficient means of gathering quantitative data, complementing them with qualitative methods can enrich the study's depth and robustness. For example, conducting semi-structured interviews with a sub-sample of tour guides can provide deeper insights into their lived experiences and motivations regarding EST, WE, and WB (Bryman, 2016). This qualitative approach complements the quantitative findings by exploring the subjective understanding and meaning attached to these variables, adding a valuable layer of understanding to the research.

Sampling and Participants

Comprehensively understanding the influence of environmental sensitivity training (EST) on tour guide pro-wildlife behaviours (WB) in Sri Lanka hinges upon selecting the right individuals to participate in the research. The target population for this study is clear: all tour guides actively leading tours in wildlife-rich areas across Sri Lanka. Their role in shaping visitor experiences and influencing wildlife perception holds immense significance for conservation efforts. However, reaching the entire population proved impractical due to resource constraints. Therefore, a purposive sampling technique was strategically employed. This focused approach allows for the selection of participants who directly reflect the specific population characteristics relevant to the research question (Bryman, 2016). In this case, tour guides were carefully chosen based on their confirmed work in wildlife-rich areas, ensuring the data collected accurately mirrors the target population of interest. While acknowledging the potential for bias inherent in purposive sampling (Babbie, 2010), proactive measures were taken to mitigate this risk. Tour guides were selected from diverse wildlife locations across Sri Lanka, encompassing a variety of ecological landscapes and tourism experiences. This geographical heterogeneity helps ensure the sample adequately represents the wider population in terms of key characteristics. A total of 357 tour guides actively participated in the study, offering valuable insights into their experiences and behaviours. Their characteristics directly relevant to the research include years of experience and geographical distribution. Experience-wise, the sample composition reveals a diverse range, with 14% boasting less than a year in the field, 31% with 1-3 years, 46% with 4-6 years, and 7% seasoned veterans with 7-9 years of experience. Geographically, participants hail from various wildlife-rich areas across Sri Lanka, with significant concentrations in Galle (20%), Mathara (18%), Colombo (8%), Anuradhapura (11%), and Badulla (5%). Additional insights into demographic characteristics, such as age, gender, and education level, are presented in the results section for a more comprehensive

understanding of the sample composition. The sample size of 357 was carefully determined using the Krejcie and Morgan (1970) sample size table. This method considered the desired confidence level (95%) and margin of error (5%) to ensure sufficient data for robust analysis and generalizability. Additionally, this sample size falls within the acceptable range for quantitative research studies, providing adequate statistical power for reliable hypothesis testing.

Data Collection Procedures

This study employed a structured online questionnaire hosted on Google Forms to collect comprehensive data on EST, WE, and WB among Sri Lankan tour guides. This method offered convenience, efficiency, and cost-effectiveness for both participants and researchers (Fowler, 2013). The questionnaire captured diverse aspects of the tour guide experience. The first section gathered demographic information such as age, gender, education level, years of experience, and primary areas of operation. This provided a baseline understanding of the sample and allowed for comparisons between different groups. The next sections focused on the core research variables. Questions assessed participants' exposure to EST programs, the content covered, and their perceived effectiveness in fostering environmental awareness and attitudes. Questions also measured their levels of work engagement, using a validated scale to capture dimensions like vigour, dedication, and absorption in their role as tour guides. These aspects were crucial in evaluating their motivation and commitment to their profession. The final section of the questionnaire captured tour guides' engagement in specific behaviours that contributed to wildlife conservation. These included their adherence to wildlife protection guidelines, their involvement in educational initiatives for tourists, and their participation in community-based conservation projects. These questions offered valuable insights into the actions undertaken by tour guides to promote wildlife conservation. To ensure clarity and consistency in data collection, clear instructions outlined the study's purpose, ethical considerations, and estimated completion time for all participants (Ranney et al., 2015). Informed consent was obtained before accessing the questionnaire, safeguarding their rights and ensuring voluntary participation. A designated timeframe for data collection maintained a structured process and facilitated timely completion. The quality and reliability of the collected data were paramount. The questionnaire underwent a rigorous review process, ensuring logical flow, clear question wording, and appropriate response formats. Cronbach's alpha coefficients were calculated for all scales, exceeding the recommended threshold of 0.70 and indicating high internal consistency and reliability (Bernardi, 1994). Meticulous data screening procedures addressed any inconsistencies, missing values, or outliers, ensuring the integrity of the final dataset.

Data Analysis Procedures

The collected data underwent a rigorous preparation phase prior to statistical analysis. This process involved several key steps to ensure accuracy and integrity. First, descriptive statistics, frequency distributions, and histograms for each variable were examined to identify potential anomalies and assess data quality (Sunderland et al., 2019). This helped to detect inconsistencies and errors early on. Next, missing data were addressed by carefully removing cases with a significant proportion of missing values to minimize bias and distortion. This was appropriate given the online survey methodology and the low volume of missing data. Outliers were then identified and assessed. Extreme outliers that could distort the results were removed, while influential outliers that represented the sample were retained (Hair et al., 2019). This balanced approach ensured that the analysis reflected the true characteristics of the tour guide population. Finally, data transformations were applied when necessary to meet the assumptions of the chosen statistical tests.

Variables with significant skewness or kurtosis were transformed using logarithmic or square root transformations (Clark et al., 2016). This ensured that the data met the normality and linearity assumptions required for accurate analysis. With the data duly prepared, the analysis commenced. Descriptive statistics provided a comprehensive overview of the sample characteristics and key variables, offering valuable insights into the demographics and baseline levels of environmental sensitivity training, work engagement, and pro-wildlife behaviours among the tour guides. Confirmatory factor analysis (CFA) using SmartPLS 4 software assessed the validity and reliability of the measurement model. This involved examining both convergent and discriminant validity. Convergent validity was evaluated using Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE) to ensure that items within each construct measured the intended concept (Hair et al., 2019). Discriminant validity, which assessed the distinctness of constructs, was evaluated using the Heterotrait-Monotrait Ratio (HTMT) and Fornell-Larcker criterion (Henseler et al., 2015). Establishing both convergent and discriminant validity confirmed that the measures captured the intended constructs without undue overlap or influence from other variables. The core of the analysis involved structural equation modelling (SEM), specifically Partial Least Squares Structural Equation Modelling (PLS-SEM), to test the hypothesized relationships between the independent variable (environmental sensitivity training), the mediator variable (work engagement), and the dependent variable (pro-wildlife behaviours). PLS-SEM was chosen for its ability to handle complex models and non-normal data, which were both relevant to this study (Hair et al., 2019). Hypothesis testing determined the significance of the path coefficients between these variables, revealing the strength and direction of the hypothesized relationships. Finally, validity and reliability were assessed across different stages of the analysis. Content validity was established through a thorough literature review and expert feedback to ensure that the measurement items represented the constructs of interest (Zhao et al., 2019). Construct validity was assessed using CFA and PLS-SEM to ensure that the measurement model and the structural model fit the data well and accurately represented the underlying theory (Hair et al., 2019). Reliability was assessed using Cronbach's alpha and CR to ensure that the measurement items were consistent and reliable in measuring the constructs (Hair et al., 2019). By ensuring validity and reliability across the analysis, researchers enhanced the credibility and rigor of the research findings.

Ethical Considerations

Conducting robust research necessitates a deep commitment to ethical considerations, ensuring the well-being of participants and the integrity of the data collected. This study prioritizes ethical principles throughout the research process, adhering to the highest standards of responsible research conduct (Levitt et al., 2021). Firstly, informed consent was obtained from all participants before their participation in the study. The questionnaire clearly outlined the purpose of the research, potential risks and benefits, and their right to withdraw at any time. Confidentiality was strictly maintained, ensuring anonymized data collection and analysis, safeguarding participant privacy. Secondly, the research design, data collection instruments, and data analysis procedures were rigorously reviewed to ensure they complied with ethical guidelines. This included minimizing potential harm or discomfort to participants, avoiding bias, and respecting cultural sensitivities. Thirdly, data storage and security were prioritized. All data was stored securely with access restricted to authorized personnel. Additionally, protocols were in place for responsible data disposal upon study completion. Finally, open communication and transparency were valued throughout the research process. Participants were informed of the study's progress, and the final results will be disseminated responsibly, adhering to

ethical publication practices. In conclusion, recognizing the importance of ethical conduct in research, this study has implemented comprehensive measures to ensure the well-being of participants, the integrity of the data, and the responsible dissemination of findings. By upholding these principles, the research strives to contribute meaningfully to knowledge while respecting the rights and dignity of all individuals involved (Vanclay et al., 2013).

Limitations

This study examines the relationship between environmental sensitivity training, work engagement, and pro-wildlife behaviours among Sri Lankan tour guides in wildlife-rich areas. However, it has some limitations that need to be acknowledged and addressed in future research. One limitation is the reliance on self-reported data, which introduces the potential for response bias (Rosenman et al., 2011). Tour guides might overestimate their engagement and pro-wildlife behaviours due to social desirability or recall errors. Future research could employ mixed methods that incorporate qualitative data to provide deeper insights into tour guides' motivations and experiences. Another limitation is the purposive sampling technique, which restricts the generalizability of the findings to the entire population of Sri Lankan tour guides. Future research could implement random sampling techniques to expand the generalizability of the findings to a broader range of tour guides. A third limitation is the cross-sectional design, which restricts the ability to establish causal relationships between the variables. Changes in environmental sensitivity training, work engagement, and pro-wildlife behaviours over time cannot be directly assessed. Future research could use longitudinal studies with repeated measures to understand the dynamic relationships between these variables and how they evolve over time. A final limitation is the geographical scope of the study, which might not represent the experiences and behaviours of tour guides in other regions of Sri Lanka. Future research should explore these relationships across diverse tourism contexts in Sri Lanka to provide a more comprehensive understanding of the factors influencing pro-wildlife behaviours among tour guides. By addressing these limitations, future research can build upon this study and contribute to a more comprehensive understanding of the factors influencing pro-wildlife behaviours among tour guides not only in Sri Lanka but also in other tourist destinations across the globe. This will ultimately promote sustainable tourism practices and strengthen conservation efforts in wildlife-rich regions worldwide.

Results

Demographic factors of respondents

The sample of 357 tour guides participating in the study revealed a primarily male demographic, with 90% identifying as male and only 10% female. The majority (45%) fell within the 26-35 age range, followed by 25% in the 16-25 age group, 20% in the 36-45 age group, and 10% in the 46-55 age group. Geographically, the sample skewed heavily towards the Southern Province, with 40% of participants residing there. Other significant representations were found in the Western Province (5%), Central Province (5%), Uva Province (7%), and North Western Province (12%). Distribution across districts showed some concentration in Galle (20%) and Mathara (18%), with smaller numbers in Colombo (8%), Anuradhapura (11%), and Badulla (5%). In terms of education, the majority (59%) had completed their Ordinary Level (O/L) exams, followed by 25% with Advanced Level (A/L) qualifications, 15% with Diplomas or Vocational certifications, and a very small number (1%) holding internal or external degrees. Finally, experience levels were fairly well distributed, with 14% having less than 1 year of experience, 31% with 1-3 years, 46% with 4-6 years, and the remaining percentage falling in the 7–9-year category.

Descriptive statistics

Understanding the central tendencies and variability of data is crucial for interpreting

the relationships between Environmental Sensitivity Training (EST), Work Engagement (WE), and Pro-Wildlife Behaviours (WB) in Sri Lankan tour guides. To achieve this, researchers employed descriptive statistics to examine these variables. Central tendencies were assessed through the mean, which represents the average score for each variable. Interestingly, all three variables fell within the "Almost accepts" category, based on the established criteria ($1 \leq X < 2.5$ - Almost not accepted, $1 \leq X < 3.5$ – Average, and $3.5 \leq X \leq 5$ - Almost accepted) (Allen and Seaman, 2007). This suggests that, on average, participants tended to agree with the statements related to EST, WE, and WB, indicating a generally positive attitude towards environmental sensitivity and pro-wildlife actions. Moving on to variability, researchers examined the standard deviation (SD). Acceptable SD values for all variables were found, implying a moderate level of dispersion around the mean. This variability allows for meaningful analysis of individual differences within the data. Data distribution was assessed using skewness and kurtosis. Skewness values for most variables fell within the acceptable range of +2 to -2, indicating that the distributions were not significantly skewed. Similarly, kurtosis values also remained within the acceptable range, suggesting that the distributions were neither excessively peaked nor flat. These findings imply that the data generally adheres to the normality assumption required for subsequent statistical tests (George & Mallery, 1999).

Confirmatory Factor Analysis (CFA)

To ensure the integrity and accuracy of findings, researchers employed confirmatory factor analysis (CFA) to assess the convergent validity, or internal consistency, of the constructs used in the study. Convergent validity essentially measures how well items intended to represent a specific construct actually relate to each other and capture the underlying concept (Hair et al., 2019).

Convergent Validity

Researchers first explored the internal consistency of each construct using two key metrics: Cronbach's alpha and composite reliability (CR). Both measures provide an estimate of how well individual items within a construct co-vary and reflect the overall concept.

Table 1: Reliability and Validity

	Cronbach's alpha	**Composite reliability (CR)**	**Average variance extracted (AVE)**
WST	0.85	0.82	0.62
WE	0.79	0.87	0.56
WB	0.82	0.84	0.60

According to table 1, for all three constructs, both alpha and CR values exceeded the recommended thresholds of 0.70. These results indicate a high degree of internal consistency within each construct, suggesting that the items measuring EST, WE, and WB are highly correlated and effectively capture their intended dimensions. Next, researchers investigated the degree to which each construct explains the variance in its corresponding items through average variance extracted (AVE) analysis. This metric essentially assesses how much unique variance a construct accounts for within its own set of items. All three constructs exhibited AVE values exceeding the minimum acceptable threshold of 0.50. These findings suggest that each construct explains a substantial amount of the variance in its respective items, providing strong evidence for convergent validity (Ab Hamid, Sami, & Sidek, 2017).

Discriminant Validity

In addition to confirming the internal consistency and relevance of constructs, it's

crucial to establish that they are distinct from each other. This concept, known as discriminant validity, ensures that the relationships researchers observe between variables are not simply due to overlapping characteristics or measurement errors (Hair et al., 2019). Researchers employed two approaches to evaluate discriminant validity: Heterotrait-Monotrait Ratio (HTMT) and Fornell-Larcker criterion.

Heterotrait-Monotrait Ratio (HTMT):

Table 2: Heterotrait-Monotrait Ratio (HTMT)

	WST	**WE**	**WB**
WST			
WE	0.75		
WB	0.72	0.80	

This method compares the correlations between constructs with the average correlations between items within each construct. Ideally, the HTMT values should be below 0.85, indicating that the relationships between constructs are lower than the average similarity within each construct. As shown in Table 2, all HTMT values in study fall below the recommended threshold, ranging from 0.72 to 0.80. This suggests that the constructs of EST, WE, and WB are sufficiently distinct and not simply reflecting overlapping aspects of each other (Henseler, Ringle, & Sarstedt, 2015).

Fornell-Larcker Criterion:

Table 3: Fornell-Larcker criterion

	WST	**WE**	**WB**
WST	0.79		
WE	0.62	0.75	
WB	0.54	0.68	0.77

This approach examines the average variance extracted (AVE) for each construct in relation to the squared correlations between that construct and all other constructs in the model. Ideally, the AVE of each construct should be greater than the squared shared variance with any other construct. As shown in Table 3, all AVE values in study exceed the corresponding squared correlations. This further supports the discriminant validity of the constructs, demonstrating that each one explains more variance within its own items than it shares with any other construct in the model (Ab Hamid, Sami, & Sidek, 2017).

Hypothesis testing

The core of research questions involved examining the proposed relationships between Environmental Sensitivity Training (EST), Work Engagement (WE), and Pro-Wildlife Behaviours (WB). To test these relationships, researchers conducted hypothesis testing using the results of the structural equation modelling analysis.

Table 4: Hypothesis Testing

Hypothesis	**Path**	**Path Coefficient**	**T-Value>2**	**P-Value**	**Decision**
H1	EST → WB	0.42	3.95	0	Accepted
H2	EST → WE	0.36	3.54	0	Accepted
H3	WE → WB	0.27	2.68	0.01	Accepted

Table 4 presents the path coefficients and significance levels for each hypothesis. Researchers used P – value significance threshold as less than 0.05 to determine the acceptance or rejection of each hypothesis (Kennedy-Shaffer, 2019). The hypothesis testing results revealed strong evidence for the interconnectedness of EST, WE, and WB. Environmental sensitivity training had a direct positive effect on pro-wildlife behaviours, as well as an indirect positive effect through its influence on work engagement. These findings underscore the crucial role of training and engagement in fostering wildlife-friendly practices among tour guides, with significant implications for conservation efforts in Sri Lanka.

Mediation analysis

Table 5: Specific Indirect Effect

	Original sample (O)	**Sample mean (M)**	**Standard deviation (STDEV)**	**T statistics (|O/STDEV|)**	**P values**
EST → WE → WB	0.108	0.105	0.035	3.09	0.01

Mediation analysis offered further insights into the mechanisms underlying the relationships between EST, WE, and WB. According to table 5 results, it revealed a significant indirect effect of EST on WB through WE. This suggests that work engagement partially mediates the impact of environmental sensitivity training on pro-wildlife behaviours. In other words, EST not only directly promotes WB but also indirectly enhances them by fostering greater work engagement among tour guides.

Discussion

The primary purpose of this research was to investigate the relationship between environmental sensitivity training (EST) and pro-wildlife behaviours (WB) in Sri Lankan tour guides, with work engagement (WE) as a potential mediating factor. These findings present compelling evidence for the interconnectedness of these constructs, providing valuable insights for enhancing wildlife conservation efforts through targeted training and engagement strategies.

This study hypotheses were all confirmed by the empirical results. Researchers found a positive and significant association between EST and WB (H1), consistent with prior research suggesting that environmental sensitivity training can effectively cultivate pro-conservation attitudes and behaviours in tourism professionals (Ardoin et al., 2015; Wheaton et al., 2016). Furthermore, EST was demonstrated to have a positive and significant impact on WE (H2), aligning with studies highlighting the potential of environmental training to motivate and engage individuals in their work roles (Nafukho et al., 2023). Finally, the data revealed a positive and significant relationship between WE and WB (H3), supporting the notion that engaged employees are more likely to translate their passion into positive environmental actions (Afsar et al., 2016). The findings of this study hold significant implications for practitioners and policymakers involved in wildlife conservation and sustainable tourism development in Sri Lanka and beyond. The demonstrated effectiveness of EST in promoting both pro-wildlife behaviours and work engagement highlights its potential as a powerful tool for fostering responsible tourism practices among tour guides. By investing in effective environmental sensitivity training programs, tourism operators can contribute to wildlife conservation efforts by equipping their guides with the knowledge, skills, and motivation to act as responsible ambassadors for wildlife and natural ecosystems. Furthermore, enhancing work engagement through such training initiatives can lead to a more motivated and dedicated workforce,

ultimately benefiting both the tourism industry and the environment.

While this study offers valuable insights, it is important to acknowledge its limitations. The reliance on self-reported data may introduce potential bias, and future research could benefit from incorporating objective measures of pro-wildlife behaviours and work engagement. Additionally, the generalizability of findings may be limited to the specific context of Sri Lankan tour guides, and future studies could explore the applicability of these results in other cultural and geographical settings. Nevertheless, this research provides a solid foundation for future investigations into the complex interplay between environmental sensitivity, work engagement, and pro-environmental behaviours in the tourism sector.

Conclusion

This study examined how job engagement mediated the effects of environmental sensitivity training (EST) on pro-wildlife behaviours among Sri Lankan tour guides. The results show that EST improves job engagement and successfully promotes pro-conservation attitudes and behaviours. These findings highlight EST's potential as a formidable instrument for encouraging ethical travel and guaranteeing the preservation of wildlife. Wildlife tourism professionals should give priority to training programs that include techniques to increase employee involvement in order to optimise the advantages of EST. This entails fostering a positive work atmosphere, praising and rewarding staff members' efforts, and offering chances for career advancement. Travel agencies may enable their tour guides to effectively advocate for wildlife conservation and support the survival of Sri Lanka's natural heritage by investing in EST and fostering a healthy work environment.

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