

Volunteers' Attitudes of Leadership Behaviour in the Outdoor Curriculum Program

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ABSTRACT

Volunteers serve as catalysts for student development, fostering confidence and critical leadership skills through inclusive and ability-based participation. Grounded in Ajzen's Theory of Planned Behavior, this study investigates how behavioral, normative, and control beliefs influence volunteers' attitudes toward leadership within the Outdoor Curriculum Program at the Faculty of Sports Science and Recreation, Universiti Teknologi MARA (UiTM). A quantitative cross-sectional design was adopted, with purposive sampling used to select 233 students across the faculty in Peninsular Malaysia. Data were collected through the Volunteer Leadership Development Questionnaire (VLDQ), a validated 7-point Likert scale instrument administered via an online platform. Analysis revealed no significant gender differences in behavioral and normative beliefs; however, control beliefs—reflecting volunteers' confidence in their leadership capabilities—demonstrated significant variation between genders. This indicates that perceived behavioral control plays a central role in shaping leadership attitudes among volunteers. Compared to behavioral and normative beliefs, control beliefs emerged as the most influential determinant in developing volunteer leadership. These findings underscore the importance of targeted leadership programs that enhance self-efficacy and address gender-responsive considerations to optimize volunteer leadership potential in experiential learning environments.

Keywords: *leadership behavior, outdoor curriculum, prosocial behavior, volunteer attitudes*

INTRODUCTION

Volunteering in outdoor curriculum programs involves student engagement in voluntary activities within their university, student unions, associations, clubs, or organizations (Mustafa et al., 2020). According to Chacón et al. (2017), volunteering encompasses supportive prosocial behaviors that occur over time, benefit individuals who are not personally known to the volunteer and typically take place within structured organizational frameworks. Kragt and Holtrop (2019) further explain that volunteering is an intentional, self-directed act of assistance that is sustained over time. It is performed without the expectation of financial compensation or rewards and is often conducted in support of causes or individuals in need. Additionally, Rodell et al. (2016) emphasize that volunteering extends beyond financial donations, as volunteers contribute their skills and expertise

to assist others. Moreover, Andre et al. (2017) found that university students experience greater autonomy and emotional significance when participating in outdoor recreational activities. Many colleges and universities provide opportunities for students to engage in task forces, lead excursions, and organize activities as part of outdoor recreation programs. These leadership experiences may enhance students' preparedness for employment after graduation.

The engagement of volunteers within an organization is significantly influenced by leadership behavior. According to Zacher and Rosing (2015), effective leadership encompasses actions that encourage innovative practices among followers, provide them with autonomy for independent thought and action, and support their efforts in challenging existing norms. Fuller (2012) highlights that volunteers with a positive outlook on leadership development are more likely to believe that their social networks support their growth. This perceived support enhances their motivation to improve their leadership competencies. Additionally, Sharma and Kirkman (2015) identified key leadership behaviors directed toward individuals or teams, including delegating responsibilities, fostering autonomy in decision-making, coaching, sharing information, and seeking feedback.

Another critical aspect of this study is the comparative analysis of demographic variables across genders. Gender-based perceptions offer valuable insights into volunteer engagement and the experiences accumulated through participation. These perspectives help identify factors influencing volunteers' attitudes toward leadership behavior within outdoor program curricula. Regarding attitudes, Weaver (2015) conducted a study on volunteer tourism and found that females exhibited significantly higher motivation levels across various charitable tasks compared to males, who are less likely to show a complete lack of motivation. This finding suggested that females are more inclined toward volunteerism, while males demonstrate lower engagement overall. Additionally, prior research suggests that females are more likely than males to participate in volunteer programs (Harp et al., 2017). This trend may stem from traditional gender roles emphasizing caregiving, nurturance, and community engagement among females. In contrast, males have historically assumed provider and leadership roles, characterized by competitiveness and assertiveness (Diekmann et al., 2015).

Interestingly, some studies suggest that males may exhibit a greater predisposition toward volunteering than females. For instance, Babcock et al. (2017) found that female academics are significantly more likely than their male counterparts to assume committee positions. One possible explanation for this discrepancy is the varying preferences for low-promotability tasks between men and women. Women may prefer service-oriented roles, such as faculty senate committee participation, while caregiving responsibilities and professional obligations can sometimes limit their involvement in broader societal activities, particularly in relation to perceived behavioral control. Research suggests that women are more likely to acknowledge practical limitations, such as childcare responsibilities or professional commitments while engaging in volunteer activities (Tiraieyari et al., 2019).

This recognition often translates into a heightened moral obligation, making women more inclined toward volunteerism. The analysis of existing literature reveals various factors influencing volunteer attitudes toward leadership behavior, with a significant focus on gender perspectives. It is evident that not all influencing factors necessarily encourage volunteer whereby in some cases, these elements may hinder an individual's willingness to engage. Additionally, gender plays a crucial role in volunteer involvement, with most studies indicating that women are more actively engaged in volunteer initiatives than men.

Outdoor recreation, often referred to as outdoor activity, includes leisure pursuits conducted in natural settings (Ozen, 2015). These activities encompass hiking, camping, mountain climbing, biking, canoeing, caving, and kayaking. Highfill et al. (2018) argue that outdoor recreation comprises both organized activities, such as gardening and structured outdoor events, and informal pursuits like hiking and camping. The term "outdoor recreation" broadly refers to leisure activities undertaken in natural environments, typically requiring physical effort. Clemens et al. (2018) further define

outdoor recreation as activities that allow individuals to appreciate nature while engaging in leisurely experiences such as exploration, relaxation, and adventure-seeking.

The Outdoor Curriculum Program is designed to foster leadership skills through experiential learning, yet its success largely depends on the attitudes and behaviors of volunteer leaders. While volunteers are critical in facilitating activities and mentoring participants, research indicates that their attitudes significantly shape leadership effectiveness in outdoor education. Negative attitudes, such as resistance to adaptability, low motivation, or poor communication, can undermine leadership development and participant engagement. Conversely, volunteers who exhibit enthusiasm, emotional intelligence, and a growth mindset, these skills have been shown to enhance experiential learning outcomes.

However, much of the existing literature focuses on the outcomes of leadership programs rather than the underlying psychological drivers that influence volunteer leaders' behavior. Limited attention has been given to how volunteers' internal beliefs and attitudes translate into observable leadership practices in dynamic, outdoor educational contexts. This gap becomes particularly significant given the reliance on volunteers to model and sustain effective leadership in experiential learning environments. Despite the growing emphasis on outdoor leadership programs, a gap exists in understanding how volunteer attitudes directly influence leadership behaviors in such settings. Thus, this study examines the key factors: behavioral, normative, and control beliefs that shape volunteers' attitudes toward leadership behavior in the Outdoor Curriculum Program. The findings will contribute to evidence-based improvements in volunteer training and program design, ensuring optimal leadership development in outdoor education.

RESEARCH METHODS

This study received ethical approval from the UiTM Research Ethics Committee (REC122023 (PGMR478)). A purposive sampling technique was employed to ensure that participants possessed direct experience with outdoor educational programs relevant to the study's objectives. A total of 233 students from the Outdoor Curriculum Program at various UiTM campuses—including Arau Perlis, Shah Alam, Puncak Alam, Seremban, and Jengka participated by completing a structured questionnaire. To qualify for inclusion, students were required to be currently enrolled in the specified campuses and to have completed coursework in outdoor recreation skills and management, as outlined in the program curriculum. Students who had not participated in the outdoor program were excluded to maintain the relevance and coherence of the sample. Out of 557 eligible Diploma and Degree students, a minimum sample size of 226 was determined using the Krejcie and Morgan (1970) formula. The final number of respondents ($N = 233$) exceeded this threshold, thereby enhancing the statistical reliability and generalizability of the study. Demographic details of participants, including gender, academic level, and duration of program involvement, are summarized in Table 1.

Table 1: Demographic Characteristics of Participants (N=233)

Characteristic	Frequency (%)
Gender	
Male	121 (51.9%)
Female	112 (48.1%)
Academic Qualification	
Diploma	122 (52.4%)
Degree	111 (47.6%)
Age Group	
Youth (≤ 25 years)	231 (99.1%)
Adult (> 25 years)	2 (0.9%)
Level of Experience in Outdoor Recreation Program	
Active	51 (21.9%)
Moderate	112 (48.1%)
Inactive	70 (30.0%)

Prior Experience in Outdoor Activities (Excluding FSR Program Content)	
Yes	205 (88.0%)
No	28 (12.0%)
Improved Communication Skills through Outdoor Program	
Yes	233 (100%)

Note: Percentages are rounded to one decimal place.

Research Instrument

The questionnaire consists of four main sections. Section A pertains to demographic data, evaluating variables such as gender, level of education, program code, UiTM branch, and experience in outdoor activities. Section B includes 17 items designed to assess students' behavioural beliefs and their evaluations of behavioural outcomes. Section C comprises 16 items that examine students' subjective norms, focusing on normative beliefs and motivation to comply. Section D contains 17 items that evaluate students' control beliefs, specifically control belief strength and control belief power.

The reliability analysis indicated that Section B had a Cronbach's alpha value of 0.91, demonstrating high internal consistency. However, Section C and Section D yielded Cronbach's alpha values of 0.77 and 0.75, respectively, which are considered acceptable. Despite this, Bang and Lee (2014) reported that the Cronbach's coefficients for the Theory of Planned Behaviour (TPB) constructs which includes attitude (0.95), subjective norm (0.74), perceived behavioural control (0.80), and intention (0.74) were within an acceptable range, supporting the use of these measures in behavioural research. Accordingly, this study adopted the Cronbach's alpha standards that Konting et al. (2009) established to validate reliability.

The Volunteer Leadership Development Questionnaire (VLDQ), developed by Ary et al. (2010), utilizes a 7-point Likert scale across all sections to assess various leadership development attitudes among volunteers. Section B examines behavioural beliefs, where participants rate the likelihood of specific behaviours on a scale from 1 (very unlikely) to 7 (very likely). For behavioural belief outcome evaluations, responses range from 1 (very undesirable) to 7 (very desirable). Section C focuses on subjective norms, particularly normative beliefs, using a 1 (very unimportant) to 7 (very important) scale. Additionally, motivation to comply is measured with responses ranging from 1 (very undesirable) to 7 (very desirable). Section D assesses control beliefs in two dimensions. Control belief strength is evaluated using a 1 (very unlikely) to 7 (very likely) scale, while control belief power is measured on a scale from 1 (rarely) to 7 (very frequently). This structured approach ensures a comprehensive assessment of the factors influencing volunteer leadership development, allowing for precise measurement of attitudes, norms, and beliefs within the study.

Research Procedures

The survey was conducted through an online platform, ensuring accessibility from various devices, including smartphones, tablets, and computers. To facilitate seamless data collection, Google Forms was utilized as the primary tool for survey creation and distribution. To maximize participation, the survey link was strategically disseminated across institutional groups and private WhatsApp networks, providing students with an effortless means of access and engagement. Participants were assured of complete anonymity, as no personally identifiable information was collected. Furthermore, strict confidentiality measures were implemented to ensure that responses remained unlinked to individual identities. The survey process was designed to be efficient and secure, requiring only 10 to 15 minutes to complete, enabling students to share their valuable insights with minimal time commitment.

Statistical Analysis

Statistical analysis was conducted by calculating the arithmetic mean and standard deviation for continuous variables, while categorical variables were analyzed using frequency and percentage distributions. To examine differences in volunteer attitudes toward leadership behavior, including behavioral belief, normative belief, and control belief, the Independent Sample T-Test was employed to compare gender-based variations among students in the Outdoor Program Curriculum at the Faculty of Sports Science and Recreation, UiTM. All collected data were analyzed using the Statistical Package for the Social Sciences (SPSS) Version 28 for Windows, ensuring robust and reliable statistical interpretation of findings.

FINDINGS AND DISCUSSION

Table 2: The mean score and standard deviation of the calculated variables of factors 'volunteer' attitudes of leadership behaviour' (behaviour belief)

Group Statistics					
	Gender	N	Mean	Std. Dev.	Std. Error Mean
Behavioural Belief	Male	121	5.9334	.80332	.07303
	Female	112	5.8004	1.09168	.1035

Table 3: Independent Sample T-Test of factors 'volunteer' attitudes of leadership behaviour' (behaviour belief) between gender (N=233)

Independent Sample T-Test									
Levene's Test for Equality of Variances					t-test for Equality of Means				
	F	Sig	t	df	Sig (2 tailed)	Mean Diff.	Std Error Diff.	95% Confidence Interval of the Diff.	
								Lower	Upper
Behavioural Belief	10.761	.001	1.064	231	.288	.13298	.12494	-.11319	.37914
			1.052	202.985	.294	.13298	.12639	-.11622	.38218

*p-value < .05, **p-value < .01

According to the Independent Samples T-Test results (Tables 2 and 3), there are no significant mean differences between males and females in the volunteer attitudes toward leadership behaviour factor, specifically regarding behavioural belief. The p-value obtained from Levene's Test for behavioural belief is 0.288, which exceeds the 0.05 threshold, indicating homogeneity of variance. Furthermore, the t-test results confirm the absence of a statistically significant difference in the behavioural belief subscale, with $t(231) = 1.064$, $p = 0.288$ (two-tailed). The mean score for male participants was $M = 5.93$, $SD = 0.803$, while the mean score for female participants was $M = 5.80$, $SD = 1.09$. These findings suggest that gender does not play a substantial role in shaping behavioural beliefs related to volunteer attitudes in leadership contexts.

Table 4: The mean score and standard deviation of the calculated variables of factors 'volunteer' attitudes of leadership behaviour' (normative belief).

Group Statistic					
	Gender	N	Mean	Std. Dev	Std. Error Mean
Normative Belief	Male	121	5.6839	.95174	.08652
	Female	112	5.5837	.99822	.09432

Table 5: Independent Sample T-Test of factors 'volunteer' attitudes of leadership behaviour' (normative belief) between gender (N=233)

Independent Sample T-Test	
Levene's Test for Equality of Variances	t-test for Equality of Means

	F	Sig	t	df	Sig (2 tailed)	Mean Diff.	Std Error Diff.	95% Confidence Interval of the Diff.	
								Lower	Upper
Normative Belief	1.736	.189	.784	231	.434	.10018	.12776	-.15154	.35190
			.783	227.437	.435	.10018	.12800	-.15203	.35239

p-value* < .05, *p-value* < .01

According to the Independent Sample T-Test results (see Tables 4 and 5), there are no significant mean differences between males and females in the normative belief subscale of volunteer attitudes toward leadership behaviour. The *p*-value obtained from Levene's Test for normative belief is 0.434, which exceeds the 0.05 threshold, indicating homogeneity of variance and confirming that the assumption of equal variances is met. Furthermore, the *t*-test results reveal $t(231) = 0.784$, $p = 0.434$ (two-tailed), suggesting no statistically significant difference between gender groups. The mean score for male participants was $M = 5.68$, $SD = 0.952$, while the mean score for female participants was $M = 5.58$, $SD = 0.998$, indicating that males exhibited a slightly higher average score than females. However, this difference is not statistically significant, implying that gender does not substantially influence normative beliefs regarding volunteer attitudes toward leadership behaviour.

Table 6: The mean score and standard deviation of the calculated variables of factors 'volunteer' attitudes of leadership behaviour' (control belief)

Group Statistics					
	Gender	N	Mean	Std. Dev.	Std. Error Mean
Control Belief	Male	121	4.9514	1.17661	.10696
	Female	112	4.2799	1.2992	.12264

Table 7: Independent Sample T-Test of factors 'volunteer' attitudes of leadership behaviour' (control belief) between gender (N=233)

Independent Sample T-Test									
Levene's Test for Equality of Variances					t-test for Equality of Means				
	F	Sig	t	df	Sig (2 tailed)	Mean Diff.	Std Error Diff.	95% Confidence Interval of the Diff.	
								Lower	Upper
Control Belief	1.861	.174	4.142	231	.000	.67145	.16212	.35203	.99087
			4.126	244.134	.000	.67145	.16273	.35076	.99213

p-value* < .05, *p-value* < .01

According to the Independent Sample T-Test results (see Tables 6 and 7), a significant mean difference was observed between males and females in the control belief subscale of volunteer attitudes toward leadership behavior. The *p*-value obtained from Levene's Test for control belief is 0.000, which is less than 0.05, indicating a statistically significant difference in variances between gender groups. The *t*-test results further confirm this significant difference, with $t(231) = 0.142$, $p = 0.000$ (two-tailed). The mean score for male participants was $M = 4.95$, $SD = 1.18$, while the mean score for female participants was $M = 4.28$, $SD = 1.29$. These findings suggest that males exhibit higher control belief scores than females, implying that gender may play a role in shaping perceptions of leadership control within volunteer contexts.

DISCUSSION

This study highlights that among the three Theory of Planned Behavior (TPB) constructs, control belief plays a pivotal role in shaping volunteers' attitudes toward leadership behavior within the context of outdoor curriculum programs. The lack of statistically significant differences in behavioral and normative beliefs between male and female participants suggest that perceptions of leadership benefits and societal expectations are largely shared across genders. However, the observed gender difference

in control belief indicates a disparity in perceived leadership agency, with male students reporting greater confidence in their ability to influence leadership outcomes.

This finding supports prior literature on gender and self-efficacy, where men often demonstrate higher levels of self-confidence in leadership contexts even when objective performance indicators are equivalent (Gupta, 2016). Such patterns are frequently linked to socialization processes that encourage agentic traits (e.g., assertiveness, autonomy) in males, while females may internalize communal roles that emphasize supportiveness over authority (Diekmann et al., 2015). As Lacerenza et al. (2017) noted, self-efficacy and confidence are critical to leadership development, directly influencing willingness to assume responsibility, engage in decision-making, and embrace uncertainty.

The implications for practice are substantial. Leadership development initiatives in outdoor programs must go beyond skill-building to actively cultivate psychological empowerment, particularly among female students. Evidence-based strategies include: (i) Confidence-focused training modules embedded within experiential learning tasks, (ii) Gender-inclusive role modeling to challenge stereotypes and normalize diverse leadership expressions, (iii) Reflective exercises that encourage students to interrogate personal leadership barriers and strengths.

Furthermore, the non-significant gender differences in behavioral and normative beliefs point to a shared value placed on leadership roles and peer expectations, suggesting that interventions should not presume a lack of motivation among underrepresented groups, but rather address differences in perceived capability. By centering control belief in leadership training, and attending to gendered self-perceptions, outdoor education programs can create more inclusive leadership ecosystems that empower all volunteers to lead with confidence and authenticity.

Extended Discussion on Gender Differences in Volunteer Leadership Attitudes

The findings of this study reveal a nuanced perspective on how gender influences volunteer attitudes toward leadership behaviour, particularly in terms of control belief, while behavioural and normative beliefs remain unaffected. These results suggest that self-confidence and perceived control over leadership opportunities play a more crucial role than individual perceptions of leadership or societal expectations. This distinction has several implications for leadership development, volunteer engagement, and educational strategies in outdoor curriculum programs.

Self-Confidence and Leadership Perception

Previous research highlights that men tend to exhibit higher levels of self-confidence and self-efficacy than women, despite comparable actual performance (Gupta, 2016). This difference is largely attributed to socialization patterns that shape distinct leadership expectations based on gender. Men are often encouraged to take initiative and assert leadership from an early stage, whereas women may face implicit societal barriers that dampen their confidence in leadership roles. These gendered perceptions affect how volunteers engage in leadership opportunities, influencing their willingness to lead and the degree to which they feel in control of their leadership trajectory. The role of self-efficacy in leadership development cannot be overstated, as strong confidence levels encourage proactive behaviours, risk-taking, and decision-making, all critical attributes in outdoor recreation leadership. Lacerenza et al. (2017) assert that high self-confidence is strongly linked to effective leadership performance, further supporting the significance of control belief in leadership behaviour among volunteers.

Implications for Outdoor Leadership Training

Given the observed gender differences, outdoor education programs must recognize and address disparities in confidence-building to ensure equitable leadership development. Strategies to mitigate gender-based differences in leadership confidence include (i) Targeted Leadership Training – Outdoor programs should integrate structured leadership workshops that focus on enhancing self-

efficacy and confidence, particularly for female participants who may feel hesitant to take on leadership roles. (ii) Mentorship and Role Modelling – Providing gender-inclusive mentorship can help volunteers develop a stronger belief in their leadership abilities. Female role models in leadership positions within outdoor recreation can positively influence confidence levels and, (iii) Encouraging Autonomous Leadership – Allowing students to practice leadership roles in controlled environments, such as leading outdoor activities or organizing group initiatives, can foster leadership confidence in both genders.

Gender Norms and Leadership Engagement

The absence of significant gender-based differences in behavioural and normative beliefs suggests that volunteers generally accept leadership principles and societal expectations equally, regardless of gender. This underscores that attitudes toward leadership are not dictated by external influences but rather by personal confidence in leading others. However, research shows that gender norms still shape leadership engagement in indirect ways. Diekmann et al. (2015) argue that women are socially conditioned to adopt more communal traits, such as nurturing and collaboration, whereas men are more inclined toward agentic characteristics, including assertiveness and competitiveness. These distinctions influence leadership approaches, leading men and women to adopt different leadership styles rather than differing attitudes toward leadership itself.

Future Considerations for Volunteer Leadership Development

To build inclusive leadership environments, institutions must consider both psychological and social influences when designing leadership training programs. Strategies to bridge gender confidence gaps include (i) Expanding experiential learning opportunities that encourage hands-on leadership roles for all students, (ii) Creating gender-balanced leadership teams to promote diverse leadership styles and perspectives, (iii) Conducting awareness programs addressing self-efficacy, leadership perception, and confidence-building strategies tailored to outdoor recreation settings. By acknowledging the importance of control belief in leadership development and addressing gender-specific challenges, outdoor education programs can cultivate well-rounded leaders and foster more equitable participation in leadership initiatives. These insights are essential for shaping future leadership development programs and promoting inclusive learning experiences where all students feel empowered to step into leadership roles confidently.

SUGGESTION FOR FUTURE RESEARCH

Future research in this promising field should focus on gender disparities in the factors influencing volunteers' attitudes toward leadership behaviour. While quantitative studies provide valuable statistical insights, qualitative research methods, such as focus groups and in-depth interviews, offer a deeper understanding of how gender shapes leadership perceptions, control beliefs, and normative beliefs.

Advantages of Qualitative Approaches in Leadership Studies

A qualitative research approach can clarify the underlying mechanisms through which gender differences emerge in volunteer leadership attitudes. The following methodological strengths highlight the importance of using focus groups and interviews to complement existing quantitative findings:

(i). Understanding Behavioural Beliefs in Leadership

Through qualitative interviews and focus groups, researchers can comprehensively explore volunteers' opinions, attitudes, and beliefs regarding leadership behaviours. This approach allows participants to articulate what they perceive as effective leadership, the motivating factors behind their leadership aspirations, and the situational influences shaping their perspectives. For instance, male and female volunteers may have different expectations of leadership behaviours, shaped by societal gender

roles and past experiences. A qualitative inquiry into their interpretations of decision-making, authority, and leadership styles can reveal valuable insights into gender-based differences in how leadership is defined and enacted.

(ii). Examining Normative Beliefs: Social Standards and Leadership Expectations

Normative beliefs refer to social expectations surrounding leadership behaviour whether individuals believe leadership roles should be assumed by certain groups and how social norms influence leadership participation. Qualitative methods can uncover the extent to which volunteers' perceptions of leadership are influenced by societal expectations and organizational cultures. For example, do male and female volunteers feel equally encouraged to take leadership roles? How do institutional policies or peer influences shape their self-perceptions as leaders? These inquiries may help clarify whether gender-specific norms act as facilitators or barriers to leadership engagement.

(iii). Investigating Control Beliefs: Perceived Leadership Capabilities and Obstacles

Control beliefs reflect individuals' perceptions of their ability to execute leadership responsibilities and the factors that either support or hinder leadership participation. Using qualitative interviews and focus groups, researchers can explore volunteers' feelings of empowerment, their perceived leadership readiness, and barriers related to gender differences. This may include discussions on, systemic obstacles preventing female volunteers from assuming leadership roles, how male volunteers perceive their own leadership control compared to females and institutional mechanisms that either strengthen or diminish volunteers' leadership confidence. Understanding these influences provides a more nuanced picture of the structural and psychological factors affecting leadership participation in volunteer settings.

In summary, qualitative methods provide essential insights into how gender influences volunteers' perceptions of leadership behaviors. By complementing quantitative findings, qualitative interviews and focus groups offer a richer understanding of leadership engagement, enabling more effective interventions to bridge gender gaps in volunteer leadership development. These findings will be beneficial in shaping future educational strategies, creating equitable leadership training programs, and cultivating more inclusive leadership environments across volunteer settings.

CONCLUSION

This study underscores the pivotal role of control belief in shaping volunteers' attitudes toward leadership behavior within outdoor curriculum programs. While behavioral and normative beliefs appear consistent across gender, the significant disparity in control belief suggests that male students perceive greater agency in assuming leadership roles compared to their female counterparts. These findings illuminate the central influence of perceived self-efficacy on leadership engagement and reflect broader socio-cultural dynamics related to confidence, leadership identity, and gendered self-perceptions. To enhance the effectiveness of leadership development initiatives, future programs must integrate strategies that actively build self-confidence, particularly among students who may internalize lower control beliefs. Gender-responsive approaches such as mentorship, structured leadership opportunities, and inclusive pedagogies can help bridge this confidence gap, ensuring equitable leadership participation for all. By recognizing the nuanced psychological mechanisms underpinning volunteer leadership behaviors, institutions can cultivate more inclusive, empowered, and resilient student leaders capable of navigating complex and collaborative outdoor education environments.

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AUTHORS' CONTRIBUTION

Nor Adilla conceived and planned the data collection of the study and ran the analysis. Ahmad Fikri took the lead in writing the manuscript. Siti Hannariah contributed to the interpretation of the results. All authors provided critical feedback and helped shape the research, analysis and manuscript.

CONFLICT OF INTEREST DECLARATION

We certify that the article is the Authors' and Co-Authors' original work. The article has not received prior publication and is not under consideration for publication elsewhere. This research/manuscript has not been submitted for publication, nor has it been published in whole or in part elsewhere. We testify to the fact that all Authors have contributed significantly to the work, validity and legitimacy of the data and its interpretation for submission to Jurnal Intelek.

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