PERCEIVED BEHAVIORAL CONTROL, CIVIC RESPONSIBILITY, AND ORGANIZATIONAL SUPPORT AS PREDICTORS OF VOLUNTEERS' FUTURE PARTICIPATION INTENTIONS IN LAKE CLEAN-UPS IN SAN PABLO CITY

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Sustaining volunteer participation is important to community-based environmental programs, yet willingness to return may depend on personal values, community ties, and practical conditions. This study examined whether pro-environmental attitudes, civic responsibility, place attachment, perceived organizational support, and perceived behavioral control were associated with future participation intentions in lake clean-ups in San Pablo City. A cross-sectional survey dataset containing 157 responses was analyzed using descriptive statistics, Cronbach's alpha, Pearson correlations, and multiple linear regression. Future participation intention was measured through respondents' stated plans to continue volunteering, seek further opportunities, dedicate more time, remain involved, and recommend clean-up activities. The measures demonstrated acceptable to excellent internal consistency (α = .79–.96). Respondents reported the highest mean for civic responsibility (M = 3.51, SD = 0.51) and the lowest for pro-environmental attitudes (M = 2.71, SD = 0.27). The regression model was statistically significant, $F(5, 151) = 31.86$, $p < .001$, and explained 51.3% of variance in future participation intention. Perceived behavioral control ($\beta = .47$, $p < .001$), civic responsibility ($\beta = .28$, $p =$

.002), and perceived organizational support (β = .17, p = .030) were significant positive predictors. Pro-environmental attitudes and place attachment were not significant when the other variables were controlled. Findings suggest that making participation feasible, strengthening volunteers' civic purpose, and providing supportive organizational experiences may help sustain intentions to volunteer. Because the dataset measures intentions rather than subsequent participation, the findings concern future participation intentions rather than verified long-term volunteer behavior.

Keywords: environmental volunteering, lake clean-ups, civic responsibility, place attachment, perceived behavioral control, volunteer intention

Introduction

Community-led environmental initiatives depend on more than one-time attendance. Lake clean-ups require volunteers who are willing to return, commit time, and encourage others to participate. Understanding what supports these intentions can help local organizations design environmental programs that are community-centered and sustainable.

Pro-environmental attitudes may motivate people to act on environmental concerns. The revised New Ecological Paradigm (NEP) scale measures a broad ecological worldview, including beliefs about ecological limits, human influence on nature, and the fragility of natural systems (Dunlap, Van Liere, Mertig, & Jones, 2000). However, environmental attitudes do not necessarily translate directly into sustained action. People may care about environmental protection while facing barriers such as limited time, transportation difficulties, or uncertainty about how to contribute.

The Theory of Planned Behavior offers a useful basis for examining this intention–action relationship. It proposes that intentions are associated with attitudes, perceived social expectations, and perceived behavioral control, and that perceived control can also matter when people act under practical constraints (Ajzen, 1991, 2002). In a lake clean-up context, perceived control includes whether people believe they have the time, ability, and resources to participate regularly.

Other factors may also shape the wish to return. People who feel personally obligated to contribute to community well-being may be more willing to engage in collective activities, and research on civic engagement has examined how civic responsibility and place attachment relate to intentions to participate in community life (Dang, Seemann, & Ma, 2022). Place attachment may motivate stewardship by connecting people's identity and valued activities to specific places, and links among place attachment, civic engagement, and pro-environmental behavior have been investigated (Irani, Rasoulzadeh Aghdam, & Ghasemzadeh, 2023). Organizational experiences may matter as well. Perceived organizational support concerns whether individuals believe an organization values their contribution and cares about their well-being, and in volunteer settings, recognition, responsiveness, and practical assistance may help make continued participation feel worthwhile and manageable.

In San Pablo Colleges, previous institutional research has considered how innovation initiatives relate to employees' attitudes, values, intentions, and readiness for change (Lunar & Eala, 2023). Subsequent work examined sustainability initiatives across economic, social, environmental, governance, and continuous-improvement domains, connecting sustainability with institutional effectiveness (Lunar, Eala, & Perez, 2025). These studies provide a local institutional context: sustainability initiatives depend not only on institutional commitments but also on the engagement and continued contribution of people within and around the institution. The present study, however, focuses on individual respondents' intentions to participate in lake clean-ups and does not measure the implementation or effectiveness of San Pablo Colleges programs.

Attitudes, perceived control, civic responsibility, place attachment, and organizational support have thus each been linked to engagement, but the sources consulted for this study do not examine them together as predictors of volunteers' intentions to return to lake clean-ups in San Pablo City. Addressing this gap, the study asked four questions: (a) What are the levels of respondents' pro-environmental attitudes, civic responsibility, place attachment, perceived organizational support, perceived behavioral control, and future participation intention? (b) What are the internal consistency reliabilities of the multi-item measures? (c) How are the study variables associated with future participation intention? and (d) Which study variables significantly predict future participation intention when considered together? The outcome is respondents' stated intention to

volunteer in the future; the study did not measure whether they subsequently attended or continued volunteering. The purpose of the study was to examine the relationships between volunteers' pro-environmental attitudes, civic responsibility, place attachment, perceived organizational support, perceived behavioral control, and future participation intention in lake clean-ups in San Pablo City.

Method

The study used a cross-sectional, quantitative correlational design. The analyzed dataset contained 157 survey responses submitted between September 7 and December 6, 2025, with demographic information and item-level responses for six constructs. The independent variables were pro-environmental attitudes, civic responsibility, place attachment, perceived organizational support, and perceived behavioral control, and the dependent variable was future participation intention. The dataset did not include a sampling frame or recruitment log, so the sampling method and response rate could not be independently established.

The sample comprised 157 respondents. Of these, 116 (73.9%) identified as female and 41 (26.1%) as male. Most respondents identified as students (139; 88.5%), and the remaining 18 represented faculty, organizational, civic, and other sectors. Ages ranged widely, but the dataset contained inconsistent age entries, including text-form responses, so age was not included as a predictor in the regression analysis.

The survey used four-point response items coded from 1 to 4. Scale scores were calculated as the mean of their items, with higher values indicating stronger endorsement of the construct. Pro-environmental attitudes were assessed with 15 items patterned on the revised NEP scale, with even-numbered items reverse-scored so that higher scores consistently represented a more ecological worldview, in accordance with the scale's scoring convention (Dunlap et al., 2000). Civic responsibility was measured with 12 items concerning community awareness, obligation, involvement, and perceived efficacy, and place attachment with 12 items concerning lake-related identity, attachment, and place dependence. Perceived organizational support was assessed with eight items, two of which were negatively worded and reverse-scored. Perceived behavioral control was assessed with six items about the ease, ability, resources, autonomy, and

barriers involved in regular participation, with the negatively worded barrier item reverse-scored. Future participation intention was measured with five items concerning respondents' plans to continue volunteering, seek future opportunities, dedicate more time, remain involved, and recommend clean-up activities.

Descriptive statistics summarized the construct scores, and internal consistency was evaluated using Cronbach's alpha. Pearson product-moment correlations were calculated to examine bivariate associations. Multiple linear regression estimated the unique association of each predictor with future participation intention while controlling for the other predictors, all five of which were entered together. Statistical tests were two-tailed, with significance set at $p < .05$. The dataset included an optional name field; names were not used in the analyses or reported.

Results and Discussion

The results are presented in the order of the four research questions, each followed by its interpretation, comparison with related literature, and implications.

Levels of the Study Variables

The responses came from 157 individuals, most of whom were students, and nearly three-quarters identified as female; the results therefore reflect primarily the perspectives of student respondents. On the four-point scale, civic responsibility had the highest mean ($M = 3.51$, $SD = 0.51$), followed by future participation intention ($M = 3.34$, $SD = 0.62$), place attachment ($M = 3.21$, $SD = 0.61$), perceived behavioral control ($M = 3.13$, $SD = 0.51$), and perceived organizational support ($M = 3.12$, $SD = 0.39$). Pro-environmental attitudes had the lowest mean ($M = 2.71$, $SD = 0.27$).

Respondents thus reported relatively strong civic responsibility and intentions to continue volunteering, while endorsing a broad ecological worldview, as measured by the NEP-based items (Dunlap et al., 2000), least among the constructs. This contrast is consistent with the view that general environmental attitudes do not necessarily translate directly into action. Because the means describe stated intentions among a predominantly student sample, they should not be read as indicating actual volunteer behavior in the wider community.

Internal Consistency of the Measures

All six measures had Cronbach's alpha values of .79 or higher, ranging from .79 for perceived behavioral control (six items) to .96 for place attachment (12 items). The values for the other measures were .83 for pro-environmental attitudes (15 items), .95 for civic responsibility (12 items), .86 for perceived organizational support (eight items), and .94 for future participation intention (five items). The measures therefore demonstrated acceptable to excellent internal consistency, which supports using the construct scores in the correlation and regression analyses. Reliability estimates alone, however, do not establish construct validity.

Associations with Future Participation Intention

Future participation intention was positively correlated with perceived behavioral control ($r = .63$), civic responsibility ($r = .59$), perceived organizational support ($r = .49$), and place attachment ($r = .49$), all at $p < .001$. Its correlation with pro-environmental attitudes was small and not statistically significant ($r = .07$). The predictors were also related to one another. Civic responsibility correlated with place attachment ($r = .62$), perceived organizational support ($r = .64$), and perceived behavioral control ($r = .51$); place attachment correlated with perceived behavioral control ($r = .64$) and perceived organizational support ($r = .42$); and perceived organizational support correlated with perceived behavioral control ($r = .36$). Pro-environmental attitudes were only weakly related to the other constructs, with correlations from –.07 (perceived behavioral control) to .29 (perceived organizational support).

The strongest bivariate association for perceived behavioral control is consistent with the Theory of Planned Behavior, which treats perceived control as relevant to intentions (Ajzen, 1991, 2002), and the association for civic responsibility fits research linking civic responsibility and place-related ties with civic engagement (Dang et al., 2022). The near-zero correlation for pro-environmental attitudes indicates that general attitudes toward human–nature relationships may not correspond closely to the specific decision to attend lake clean-ups. The moderate to strong intercorrelations among the other predictors imply that their bivariate associations with intention overlap, which is why their unique contributions were examined in the regression model.

Predictors of Future Participation Intention

The multiple regression model was statistically significant, $F(5, 151) = 31.86$, $p < .001$, explaining 51.3% of the variance in future participation intention (adjusted $R^2 = .50$). Perceived behavioral control had the largest standardized coefficient ($B = 0.57$, $SE = 0.09$, $\beta = .47$, $t = 6.14$, $p < .001$), followed by civic responsibility ($B = 0.34$, $SE = 0.11$, $\beta = .28$, $t = 3.20$, $p = .002$) and perceived organizational support ($B = 0.26$, $SE = 0.12$, $\beta = .17$, $t = 2.19$, $p = .030$). Pro-environmental attitudes ($B = -0.00$, $SE = 0.14$, $\beta = -.00$, $t = -0.00$, $p = .999$) and place attachment ($B = -0.06$, $SE = 0.08$, $\beta = -.06$, $t = -0.72$, $p = .471$) were not significant after accounting for the other variables.

The prominence of perceived behavioral control is consistent with the Theory of Planned Behavior (Ajzen, 1991, 2002). Respondents who felt more able to participate tended to report stronger intentions to volunteer in the future, so willingness to return may depend on whether participation feels manageable: whether people have enough time, the ability to take part, and a way to overcome barriers. Clean-up programs may support participation by communicating dates early, offering accessible meeting points, clarifying tasks and equipment needs, and creating flexible roles for volunteers with different schedules.

Civic responsibility was also a significant predictor. Respondents who felt accountable for community well-being and believed they could contribute tended to report stronger intentions, a pattern compatible with research linking civic responsibility and place-related social ties with civic engagement (Dang et al., 2022). For local lake programs, organizers could connect clean-up activities to community stewardship goals and provide volunteers with clear opportunities to contribute meaningfully. Perceived organizational support remained significant even after controlling for civic responsibility, place attachment, and perceived control, which suggests that volunteers' experiences with the organizing group may matter to their willingness to return. Clear communication, respect for volunteers' time, acknowledgment of contributions, and practical support may help volunteers feel that their involvement is valued, although the cross-sectional data cannot establish that such practices would increase retention.

Place attachment had a moderate bivariate correlation with intention but was not a significant unique predictor in the full model. Because it was

also correlated with civic responsibility and perceived behavioral control, its association with intention may overlap with these factors. This result does not show that place attachment is irrelevant; rather, the sample does not establish its independent contribution once the other measured constructs are considered, and prior work has considered place attachment alongside civic engagement and pro-environmental behavior (Irani et al., 2023). Pro-environmental attitudes showed no unique association with intention. Although ecological concern can provide a broad basis for environmental action, participation may depend more directly on local responsibility, organizational experience, or practical feasibility, and further research could test more behavior-specific environmental attitudes.

The two San Pablo Colleges studies provide a local frame for these findings. Lunar and Eala (2023) examined innovation initiatives through employees' attitudes, values, intentions, and readiness for change, and Lunar et al. (2025) considered sustainability across institutional domains. The present study complements this work by examining individual-level intentions to participate in a specific environmental activity, which suggests that sustainability can be considered at both institutional and community-participation levels. The dataset, however, does not test whether the institution's initiatives caused or influenced respondents' lake clean-up intentions, and all associations are cross-sectional and do not establish that changing any predictor would change intentions or behavior.

Several limitations should be considered. The cross-sectional design cannot establish temporal order or causality, and the outcome measures intentions rather than observed participation, so intention should not be described as sustained behavior. The sample was predominantly students, limiting generalizability to the broader population of lake clean-up volunteers. The dataset did not establish the sampling procedure, response rate, recruitment process, consent procedure, or ethics review status, and the inconsistent age entries led to age being excluded from the regression. Finally, acceptable to excellent internal consistency does not by itself establish construct validity.

Conclusion

Respondents reported relatively high civic responsibility and future participation intention, while pro-environmental attitudes had the lowest mean score among the study constructs. Perceived behavioral control was

the strongest unique predictor of future participation intention, and civic responsibility and perceived organizational support also had significant positive associations with intention. Pro-environmental attitudes and place attachment were not significant predictors when the variables were considered together; place attachment was correlated with intention at the bivariate level, but its independent association was not statistically significant.

Together, the five predictors explained 51.3% of the variance in future participation intention. These findings concern respondents' stated intentions to volunteer. Because the dataset did not measure subsequent attendance, it cannot establish whether respondents continued participating in lake clean-ups.

Recommendation

Organizers of lake clean-ups should announce schedules in advance, provide clear information about meeting locations and required equipment, and offer flexible roles or schedules where feasible. Activities should communicate how volunteer contributions support local lake stewardship and community well-being, and organizers may invite volunteers to help plan activities and identify local environmental priorities. Organizers should also maintain clear communication, acknowledge volunteer contributions, and provide appropriate guidance and assistance during clean-up activities.

Future studies should compare stated intentions with attendance records and follow-up surveys to determine whether the measured predictors are associated with repeated participation and retention, and should recruit a wider range of community residents and environmental volunteers while documenting recruitment and sampling procedures. Researchers should also verify and report the original consent procedure, ethics review status, recruitment process, and sampling method, and include or clearly describe the questionnaire and scoring procedures.

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