

Socio-Environmental Factors and Attitude as Determinants of Civic Engagement among Senior High School Students: A Multiple Linear Regression Analysis

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Abstract

Low civic engagement remains a global concern. The study aimed to determine the significance of socio-environmental factors and attitude as influences on civic engagement. A diagnostic research design, stratified random sampling, survey approach, and multiple linear regression were applied. The data from 155 Grade 12 students revealed that only socio-environmental factors significantly influenced civic engagement, partially affirming Social Cognitive Theory. Future studies may explore additional variables to account for the remaining 11.2% of the variance in civic engagement strength. Educational practitioners may initiate socio-environmental activities and environmental attitude-raising programs towards achieving optimal outcomes in students' civic engagement.

Keywords: Socio-environmental factors; attitude; civic engagement; senior high school students; multiple linear regression analysis

1. Introduction

1.1. Problem and Its Scope

Low civic engagement among youth remained a growing global concern, particularly in fostering active citizenship and democratic participation. Sones et al. (2024) highlighted that social isolation weakens youth social connectedness. Reduced connectedness has been associated with lower civic participation in other studies. Similarly, the ICCS report indicates that students across countries demonstrate varying but low levels of civic knowledge and limited engagement in civic-related activities, suggesting uneven participation in civic and political life (Schulz et al., 2023).

In international contexts, youth civic engagement remained low. In Europe, Barrett and Pachi (2019) found that many students show limited active participation in civic and political activities. In Japan, Endo (2023) found low civic engagement and political involvement among youth, while in Nigeria, Abdu-Raheem and Olorunda (2019) found that students exhibit low levels of awareness and responsibility toward civic engagement.

Similarly, in the Philippines, civic engagement among youth continued to decline. Balbin et al. (2023) reported that low civic engagement is associated with reduced critical thinking and weak democratic involvement. In Leyte, Cadano (2023) found that only a small number of youths are actively involved in civic engagement. In Davao City, Roncesvalles (2022) found that civic engagement among students remains low, as many choose not to participate in community activities.

Low civic engagement among senior high school students has led to several negative social and developmental outcomes. Studies indicated that low levels of civic engagement, including limited participation in civic activities and declining trust in civic institutions, are associated with reduced involvement in civic and political life among students (Schulz, 2024). Furthermore, low civic engagement may lead to diminished social responsibility, reduced community participation, and limited capacity for active citizenship, hindering students' overall civic development (Sam et al. 2019). However, despite

these findings, there is limited research examining how contemporary educational contexts influence students' civic engagement. Thus, the present study was conducted to address this gap.

1.2. Significance of the study

This study provides insights into the factors influencing civic engagement among senior high school students, particularly socio-environmental factors and attitude. Anchored in SDG 4 (Quality Education) and SDG 16 (Peace, Justice, and Strong Institutions), it emphasizes the importance of supportive environments in promoting active and responsible citizenship. The findings may help students understand and enhance their civic participation and guide Social Studies teachers in developing effective civic-oriented strategies. Moreover, the study supports the vision and mission of Holy Cross of Davao College in forming socially responsible learners. It also serves as a reference for future research and programs aimed at strengthening civic engagement.

1.3. Statement of the Problem

This study examined the significance of socio-environmental factors and attitudes as determinants of civic engagement. Specifically, it pursued the following objectives:

1. to determine the levels of socio-environmental factors in terms of parental social responsibility, parental civic engagement, civic education, classroom climate, community connectedness, and prosocial norms; attitude in terms of civic action, interpersonal and problem-solving skills, political awareness, leadership skills, social justice attitude, and diversity attitude; and civic engagement in terms of attitude and behavior;
2. to determine the significance of the relationships between socio-environmental, attitude, and civic engagement of SHS students; and
3. to determine the significance of the individual and combined degree of influence of socio-environmental and attitude as influences on civic engagement of SHS students.

1.4. Hypotheses

The null hypotheses were tested at a 0.05 level of significance:

H0₁: The relationship of the correlation between socio-environmental, attitude, and civic engagement is not significant.

H0₂: The individual and combined degree of influence of socio-environmental and attitude as influences on civic engagement is not significant.

1.5. Theoretical and Conceptual Framework

The Social Cognitive Theory, established by Albert Bandura (1986), posits that behavior is shaped through the interaction of personal factors and the environment. The idea emphasized reciprocal determinism, which described how people both influence and are influenced by their social environments. It emphasized the crucial roles of social modeling, self-efficacy, and observational learning in shaping attitudes and actions. Through experiences in their social environments and by observing others, especially important social agents such as parents, teachers, and peers, people form their views, values, and behaviors.

This theory explained how socio-environmental factors and attitudes interact to affect civic engagement among senior high school students, lending credence to the current study. The study's socio-environmental components, which included community connectedness, school climate, and parental civic participation, are consistent with Bandura's focus on social influence and environmental modeling. In the meantime, the theory's emphasis on individual characteristics is reflected in attitudinal elements such as civic engagement, leadership, and social consciousness. Social cognitive theory provided a solid basis for understanding how pupils acquire civic behaviors through the interaction of internal cognitive processes and environmental exposure.

2.3. Sample and Sampling Technique

The respondents of the study were 155 grade 12 senior high school students from three selected private schools in one of the Provinces in Davao del Norte. The participants were officially enrolled during the Academic Year 2025–2026 and were aged 18 years old and above.

A stratified random sampling technique was employed, with each school serving as a stratum and participants randomly selected proportionally within each school. According to Berndt (2020), stratified random sampling divides the population into subgroups based on shared characteristics and selects participants proportionally from each stratum. Based on the guidelines of Johnson and Christensen (2024), the sample size of 155 was considered sufficient and representative of the target population.

2.4. Data Gathering Technique

In this study, data-gathering techniques were employed in a survey. It is a research method that collects information from a group of respondents via structured questionnaires or survey forms to understand their opinions, experiences, or behaviors (Taherdoost, 2021).

The study utilized three adapted and modified questionnaires to gather the necessary data. First, the socio-environmental factors, the questionnaire was adapted from Silke C. et al. (2020), with indicators including parental social responsibility, parental civic engagement, civic education, classroom climate, community connectedness, and prosocial norms. The instrument consisted of 32 items and demonstrated excellent reliability with a Cronbach's Alpha of 0.903.

The second utilized the attitude questionnaire adapted from Díaz et al. (2019). Its indicators are civic action, interpersonal and problem-solving skills, political awareness, leadership skills, social justice attitude, and diversity attitude. It contained 38 items and demonstrated good reliability (Cronbach's Alpha = 0.884).

Lastly, the civic engagement questionnaire was adapted from A. Doolittle and A. C. Faul (2013), with attitude and behavior as indicators. The instrument consisted of 14 items and demonstrated good reliability (Cronbach's Alpha = 0.861).

2.5. Data Analysis Technique

In this research, descriptive, correlation, and multiple regression analyses were used to examine and interpret the data.

According to Taherdoost (2022), descriptive analysis was used to summarize and present the basic features of collected data by describing the respondents and variables involved in the study. The mean and standard deviation were used as descriptive statistics. Moreover, Senthilnathan (2019) stated that correlation analysis determines the strength and direction of the relationship between two variables, with the Pearson r moment correlation utilized as the statistical tool in this study. Lastly, the multiple regression analysis examines how several independent variables influence or predict a single dependent variable (Hair et al, 2019). It highlights the beta value range as a statistical tool to describe the strength of the influence.

The matrix below details the mean range, descriptive levels, and the corresponding interpretations assigned to each variable included in this study. The table serves as a basis for describing the levels of socio-environmental attitudes and civic engagement.

Scale	Level	Socio-Environmental Factors	Attitude	Civic Engagement
3.26-4.00	Very High	Very Strong	Very Strong	Very Strong
2.51-3.25	High	Strong	Strong	Strong
1.76-2.50	Low	Poor	Poor	Weak
1.00-1.75	Very low	Very Poor	Very Poor	Very Weak

To measure and interpret the standard deviation, the following standard scheme was followed.

<i>Standard Deviation</i>	<i>Level of Variability</i>	<i>Interpretation</i>
1.50 and above	High	Widely spread, varied perceptions
1.00-1.49	Moderate	Moderate differences
0.50-0.99	Low	Relatively consistent with minimal differences
0.00-0.49	Very low	Highly consistent with a tight clustering around the mean.

Moreover, the correlation analysis utilized the Pearson Product-Moment Correlation Coefficient (Pearson r) to assess the relationships among socio-environmental factors, attitude, and civic engagement of senior high school students. To interpret the R-value, this study adopted Guilford's (1956) scale, as presented below.

<i>Computed r</i>	<i>Descriptive Interpretation</i>
+/- 1.00	<i>Perfect Correlation</i>
<i>Between +/- 0.75 - +/-0.99</i>	<i>High Correlation</i>
<i>Between +/- 0.51 - +/- 0.74</i>	<i>Moderately High Correlation</i>
<i>Between +/- 0.31 - +/-0.50</i>	<i>Moderately Low Correlation</i>
<i>Between +/- 0.01 - +/- 0.30</i>	<i>Low Correlation</i>
0.00	<i>No Correlation</i>

Lastly, a multiple linear regression analysis was used to test the significance of socio-environmental factors and attitudes on the civic engagement of senior high school students. In terms of the scale of Beta (β) coefficient strength, the study adopted the scheme proposed by Cohen, J. (1988) and Hair et al. (2019), as presented below.

β Value Range	Strength of Relationship
$\pm 0.00 - \pm 0.09$	Very Weak
$\pm 0.10 - \pm 0.29$	Weak
$\pm 0.30 - \pm 0.49$	Moderate
$\pm 0.50 - \pm 0.69$	Strong
± 0.70 and above	Very Strong

2.6. Ethical Consideration

The researcher secured permission to conduct the study and complied with the ethical guidelines approved by the HCDC SMILE Review Committee of the institution. Approval was also obtained from the administrators of the selected private senior high schools in Maniki, Kapalong, Davao del Norte. All respondents were informed of the study's purpose and gave informed consent before participation, with the option to withdraw at any time without penalty. Confidentiality was strictly observed, with no personal identifiers collected or disclosed. The study also complied with the Data Privacy Act of 2012 and ensured that all participants were treated ethically, fairly, and without harm or discomfort.

3. Results

The descriptive, correlation, and regression analysis results are presented. Likewise, the summary of the findings is also presented.

3.1. Descriptive Results

Table 1 is the descriptive table. It contains the variables involved in the study, namely socio-environmental, attitude, and civic engagement, along with their respective indicators. It also includes the number of samples, standard deviation, mean, and the corresponding descriptive level.

Table 1. Descriptive Table (N = 155)

Variables	SD	Mean	Interpretation
Socio-Environmental Factors	0.17	3.67	Very High
Parental Social Responsibility	0.21	3.77	Very High
Parental Civic Engagement	0.30	3.65	Very High
Civic Education	0.29	3.64	Very High
Classroom Climate	0.33	3.62	Very High
Community Connectedness	0.24	3.68	Very High
Prosocial Norm	0.34	3.64	Very High
Attitude	0.19	3.63	Very High
Civic Action	0.27	3.63	Very High
Interpersonal and Problem-Solving Skills	0.27	3.64	Very High
Political Awareness	0.36	3.62	Very High
Leadership Skills	0.41	3.56	Very High
Social Justice Attitudes	0.28	3.70	Very High
Diversity Attitudes	0.32	3.63	Very High
Civic Engagement	0.18	3.73	Very High
Attitudes	0.19	3.74	Very High
Behaviors	0.25	3.71	Very High

Table 1 specifically shows that the socio-environmental factors variable had a mean of 3.67, indicating a very high level. This indicates that the socio-environmental factors of senior high school students were very strong. All indicators were rated very high. The standard deviation of 0.17 indicates very low variability, showing that the responses were highly consistent.

Moreover, the attitude variable had a mean of 3.63, indicating a very high level. This indicates that the respondents manifested very strong attitudes. All indicators were rated very high. The standard deviation of 0.19 indicates very low variability, signifying highly consistent responses.

Similarly, the civic engagement variable had a mean of 3.73, indicating very high civic engagement. This indicates that the respondents demonstrated very strong civic engagement. All indicators were rated very high. The standard deviation of 0.18 indicates very low variability, showing highly consistent responses.

The findings revealed that socio-environmental factors, attitude, and civic engagement were all at very high levels among the respondents.

3.2. Correlation Analysis

The table specifically shows the correlation analysis between the predictive variables and the criterion variable. Specifically, it contains the predictive and criterion variables, the computed r-value, p-value, decision on the hypothesis, and the corresponding interpretation of the results.

Table 2. Correlation Table

Variables	Civic Engagement			
	r-value	p-value	Decision on H ₀	Interpretation
Socio-Environmental Factors	0.312	0.000	Reject H ₀₁	Positive, Weak but Significant Relationship
Attitude	0.251	0.002	Reject H ₀₂	Positive, Weak but Significant Relationship

Table 2 specifically shows a correlation between socio-environmental factors and civic engagement variables obtained a p-value of 0.000, which is lower than the 0.05 level of significance. Thus, the null hypothesis was rejected, indicating a significant relationship between the two variables. The computed r-value of 0.312 suggests a weak positive correlation between socio-environmental factors and civic engagement.

Moreover, the relationship between attitude and civic engagement variable yielded a p-value of 0.002, which is likewise lower than the 0.05 level of significance; hence, the null hypothesis was also rejected. The computed r-value of 0.251 indicates a weak positive correlation between attitude and civic engagement.

The findings revealed that both socio-environmental factors and attitude are positively and significantly related to civic engagement among senior high school students. However, socio-environmental factors demonstrated a slightly stronger relationship with civic engagement than attitude.

3.3. Regression Analysis

Table 3 is the regression table. It contains the determinant variables, the criterion variable, the unstandardized beta coefficient, the standardized beta coefficient, the standard error, the t-value, the p-value, and the interpretation. Finally, it shows R, R-squared, Adjusted R, and F value.

Table 3. Regression Analysis Results

Independent Variables	Civic Engagement					Interpretation
	Estimate	Stand. Estimate	SE	T	P	
Intercept	2.306		0.325	7.11	0.000	
Socio-Environmental Factors	0.261	0.249	0.090	2.90	0.004	Influence is Significant
Attitude	0.127	0.138	0.079	1.60	0.111	Influence is not Significant

R= 0.335, R²= 0.112, Adjusted R²=0.101, F=9.62, Sig.=0.000

Specifically, Table 3 shows that the influence of socio-environmental factors on the civic engagement variable yielded a Beta coefficient of 0.249, indicating that their influence on the criterion variable is weak. The corresponding p-value of 0.004 is less than the 0.05 confidence level; hence, the null hypothesis was rejected. This indicates that socio-environmental factors significantly influence civic engagement. This implies that for every unit increase in socio-environmental factors, there is a corresponding 0.249 unit increase in civic engagement.

Moreover, the influence of attitude on the civic engagement variable yielded a Beta coefficient of 0.138, indicating that attitude's influence on the criterion variable is weak. The corresponding p-value of 0.111 is greater than the 0.05 confidence level; hence, the null hypothesis was accepted. This suggests that attitude does not significantly influence civic engagement. This implies that for every unit increase in attitude, there is no significant corresponding change in civic engagement.

3.4. Summary of Findings

Based on statistical results, it was specifically found that:

1. The socio-environmental factors and attitude significantly correlated with civic engagement.
2. Individually, the socio-environmental factors, not attitude, significantly influence civic engagement; although collectively, both determinants significantly influence the criterion.

4. Discussion

This chapter presents the discussion and the study's results. Specifically, it includes the reviews of previously published studies that either supported or denied the results of this study.

4.1. Correlation of Socio-Environmental and Civic-Engagement

The results revealed a weak but significant positive relationship between socio-environmental factors and civic engagement among senior high school students. This finding supports the studies by Peart et al. (2020) and Peart et al. (2022), which emphasized the role of digital and socio-civic skills in fostering greater youth participation. Both studies similarly reported positive associations between these skills and participants' civic engagement. Moreover, Peart et al. (2024) observed comparable findings regarding digital citizenship and youth civic engagement.

Moreover, studies with modest sample sizes may have limited generalizability and reduced inferential strength, particularly in educational research settings, as discussed by Tipton et al. (2017). Hence, while the results indicate a significant relationship, the modest sample size may limit the extent to which the findings can be generalized to a broader population.

4.2. Correlation of Attitude and Civic-Engagement

The study's findings indicate that socio-environmental factors and attitude significantly influence the civic engagement of senior high school students. Although the relationships were found to be weak, the positive, significant correlations suggest that improvements in students' socio-environmental experiences and attitudes may contribute to higher levels of civic participation and involvement in community activities.

In addition, the results reveal a weak but significant positive correlation between attitude and civic engagement, indicating that more favorable attitudes are modestly associated with higher levels of civic participation. The current findings affirm that Xie et al. (2022) reported that public attitudes and institutional trust significantly influence civic engagement, emphasizing the role of broader social perceptions in shaping participation. While Bordera et al. (2023) and Vega-Tinoco et al. (2024) emphasized that personality traits and human values also contribute to civic involvement, these factors help explain the relatively weak correlation between attitude and civic engagement in the present study. Furthermore, Thompson et al. (2024) suggested that early-formed attitudes may have long-term effects on civic participation, indicating that attitudes may influence engagement over time rather than immediately.

4.3. Influence of Socio-environmental factors on civic engagement

The current findings support that civic engagement is shaped not only by individual characteristics but also by the social and environmental contexts in which students are situated. This aligns with recent evidence emphasizing that youth civic development is deeply embedded in ecological and community systems, in which schools, families, peers, and local institutions collectively shape civic participation behaviors (Sones et al., 2024).

On the other hand, these findings support the importance of strengthening school-based and community-based programs to promote active citizenship among students. Schools play a vital role in fostering civic responsibility through service learning, collaborative activities, and community participation. This supports the studies of Valencia et al. (2024) and Carmona et al. (2024), which emphasized that socio-environmental and social influences significantly shape youth civic engagement. Similarly, the current findings affirm that Martini et al. (2023) found that civic-focused educational programs improve students' trust and participation in civic activities, while Ballard, Borden, and Perkins (2021) revealed that supportive program environments help develop stronger civic engagement skills among youth.

4.4. Influence of attitude on civic engagement

The results indicate that attitude alone has a limited role in influencing civic engagement when considered alongside socio-environmental factors. This suggests that while personal attitudes contribute to civic awareness, they may not, on their own, translate directly into active civic participation without the support of enabling social and environmental conditions. This finding is consistent with Wray-Lake and Abrams (2020), who emphasized that a study involving youth participants found that adult support and community-based empowerment structures exert a stronger influence on civic participation than individual attitudes alone.

Similarly, Kwon et al. (2020), in a study of university students, reported that although positive attitudes toward human rights were associated with higher civic engagement, these attitudes did not consistently lead to action in the absence of exposure to civic information, opportunities, and supportive social norms. These findings collectively suggest that attitudes are important but insufficient predictors of civic engagement unless reinforced by strong socio-environmental support systems.

4.5. Conclusion

Based on the findings, it is concluded that only socio-environmental factors, not attitude variables, significantly influence civic engagement. The two variables collectively accounted for 11.2% of the variance in civic engagement. Hence, it partially affirms Social Cognitive Theory, who emphasize that human behavior is shaped by the dynamic interaction between personal factors and environmental influences.

4.6. Recommendations

Based on the study's conclusion, future research may examine additional variables, such as digital civic participation, peer influence, and social media exposure, to explain the remaining 88.8% of the variance in civic engagement and employ mixed-method approaches to gain deeper insights. At the same time, educational institutions are encouraged to strengthen socio-environmental support through civic-oriented programs, community involvement, and participatory classroom practices that promote students' active civic engagement. In addition, schools may implement structured civic engagement programs, such as community immersion, service-learning, and student-led initiatives, to further support students' participation in civic activities.

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