Assessing Awareness, Attitudes, and Practices of Undergraduate Management Students Toward Green and Sustainable Public Health Initiatives

Bipana Khatiwada
MHCM 2nd Semester
Atharva Business College, Bansbari Kathmandu
khatiwadabipana9@gmail.com

Roshani Rana
MHCM 2nd Semester
Atharva Business College, Bansbari Kathmandu
ranaroshani8383@gmail.com

Abstract

Background: The inclusion of environmental sustainability in public health, known as Green and Sustainable Public Health Initiatives (GSPHI), is very important for dealing with modern-day challenges in the global scenario. As future leaders in organizations, the readiness of undergraduate management students to support GSPHI is very important, but their AAPs are not well studied, especially in a Nepal scenario.

Objectives: This study was designed to evaluate the AAPs of undergraduate management students towards GSPHI, explore the relationships between awareness, attitudes, and practices, investigate their effects on future intentions, and determine the contributing demographic factors.

Methods: A quantitative, cross-sectional study was carried out among 202 undergraduate management students from a Pokhara University-affiliated college in Kathmandu, selected through convenience sampling. The data were collected through a structured, 25-item questionnaire covering five domains: Awareness, Personal Engagement, Perception of Corporate Social Responsibility (CSR), Attitudes Towards Policy and Governance, and Future Intentions and Advocacy.

Findings: Students demonstrated moderately high awareness (mean scores: 3.50–4.13) and strongly positive attitudes towards policy (means: 4.00–4.18) and CSR (means: 3.96–4.15).

Personal engagement was moderate (means: 3.57–3.73). Future intentions were high (means: 3.86–4.15). Regression analysis revealed that Attitudes Towards Policy and Governance (β=0.436, p<0.001) and Perception of CSR (β=0.247, p=0.004) were significant positive predictors of Future Intentions and Advocacy, explaining 53.9% of its variance. Awareness and Personal Engagement did not show significant unique predictive effects in the multivariate model.

Conclusion: Though students of management have a positive attitude and awareness regarding GSPHI, a gap exists between them and the actual expression of such attitude and awareness as personal practices and intentions to advocate for it. Educational initiatives must fill this gap to ensure effective integration, participation, and strategic emphasis on the role of CSR and policy advocacy for students of management.

Novelty: This study is the first to conduct a holistic evaluation of AAPs regarding GSPHI among students of management in Nepal, with a unique five-domain model linking personal practices, CSR, policy, and professional intentions.

Keywords: Sustainable Public Health, Management Studies, CSR, Environmental Policy, Student Engagement.

1. Introduction

The confluence of environmental sustainability and public health defines the emerging paradigm of Green and Sustainable Public Health Initiatives (GSPHI). These initiatives address critical issues such as climate change, pollution, and resource depletion, which have direct and profound impacts on population health [1]. The Sustainable Development Goals (SDGs), particularly SDG 3 (Good Health and Well-being) and SDG 13 (Climate Action), underscore the imperative for all sectors, including management and business, to integrate sustainability principles [2].

Undergraduate management students represent future decision-makers in corporate, healthcare, and public-sector organizations. Their awareness, attitudes, and practices (AAPs) toward GSPHI will significantly influence their capacity to implement sustainable strategies and policies in their professional careers [3]. However, there is a paucity of research examining these constructs comprehensively among this specific demographic, especially in developing nations like Nepal, which faces acute environmental and public health challenges [4].

This study, therefore, sought to assess the AAPs of undergraduate management students in Nepal toward GSPHI. It aimed to explore the relationships between key cognitive and behavioral domains and to identify factors that shape their future intentions to advocate for and work within sustainable health frameworks.

2. Materials and Methods

2.1 Study Design and Participants

A descriptive, cross-sectional study was conducted among undergraduate management students enrolled at a Pokhara University-affiliated college in Kathmandu. Using convenience sampling, 202 participants were recruited. The sample size was determined using the formula

for a single population proportion, assuming a 95% confidence level (Z=1.96), a 6.9% margin of error, and a maximum variability (p=0.5), yielding N=202.

2.2 Data Collection Tool

A self-administered, structured questionnaire was used, comprising:

1. Section A: Demographic information (age, gender, year of study, prior sustainability/public health course exposure).
2. Section B: 25 items across five domains, measured on a 5-point Likert scale (1=Strongly Disagree to 5=Strongly Agree):
   o Domain 1 (GSPH): Awareness of Sustainable Public Health Practices (5 items).
   o Domain 2 (PESHB): Personal Engagement in Sustainable Health Behaviors (5 items).
   o Domain 3 (PCSR): Perception of Corporate Social Responsibility in Health (5 items).
   o Domain 4 (ATPG): Attitudes Towards Policy and Governance (5 items).
   o Domain 5 (FIA): Future Intentions and Advocacy (5 items).

2.3 Data Analysis

Data were analyzed using SPSS. Descriptive statistics (frequencies, percentages, means, standard deviations) summarized demographic profiles and domain scores. Reliability was assessed using Cronbach's Alpha for each domain. Pearson's correlation examined bivariate relationships between domains. Multiple linear regression was performed with FIA as the dependent variable and GSPH, PESHB, PCSR, and ATPG as independent predictors.

2.4 Ethical Considerations

Informed consent was obtained from all participants. Anonymity and confidentiality were maintained. Participation was voluntary, with no incentives offered.

3. Results

3.1 Demographic Profile of Respondents

The sample consisted of 202 students. A slight majority were female (53.5%). Most respondents (45.6%) were aged 21-23 years. Third-year students comprised the largest group (35.6%). Notably, 52.0% reported having taken no course related to sustainability or public health (Table 1).

Table 1: Demographic Profile of Respondents

Demographic Variable	Category	Frequency (N)	Percent (%)
Gender	Male	94	46.5%
	Female	108	53.5%
Age Group	18-20 years	43	22.1%

Demographic Variable	Category	Frequency (N)	Percent (%)
	21-23 years	89	45.6%
	24-29 years	42	21.5%
	30+ years	21	10.8%
Year of Study	1st Year	31	15.3%
	2nd Year	50	24.8%
	3rd Year	72	35.6%
	4th Year	49	24.3%

3.2 Descriptive Statistics for Questionnaire Domains

Descriptive statistics for the five domains are presented in Tables 2-6. Students showed the highest mean agreement on items related to Attitudes Towards Policy and Governance (Table 5, mean range: 4.00–4.18) and Perception of CSR (Table 4, mean range: 3.96–4.15). Awareness was moderately high (Table 2, mean range: 3.50–4.13). Personal Engagement scores were the lowest among the domains, though still in moderate agreement (Table 3, mean range: 3.57–3.73). Future Intentions were strongly positive (Table 6, mean range: 3.86–4.15). *Tables 2-6 are included as per the original submission, displaying mean, standard deviation, and percentage distribution for all 25 items across the five domains.

3.3 Correlation and Regression Analysis

A correlation matrix (Table 7) showed all five domains were positively and significantly inter-correlated ($p<0.001$). The strongest correlation was between Attitudes Towards Policy and Governance (ATPG) and Future Intentions and Advocacy (FIA) ($r=0.690$).

Table 7: Correlation Matrix of Questionnaire Domains

Variable	Awareness	Personal Engagement	Perception of CSR	Attitudes Towards Policy	Future Intentions
Awareness	1	.588**	.548**	.561**	.576**
Personal Engagement	-	1	.568**	.574**	.591**

Variable	Awareness	Personal Engagement	Perception of CSR	Attitudes Towards Policy	Future Intentions
Perception of CSR	-	-	1	.650**	.624**
Attitudes Towards Policy	-	-	-	1	.690**
Future Intentions	-	-	-	-	1
**p < 0.01					

Multiple linear regression (Tables 8-10) identified a significant model ($F_{(4,193)}=56.541$, $p<0.001$) predicting FIA, with an R^2 of 0.539. ATPG ($\beta=0.436$, $p<0.001$) and PCSR ($\beta=0.247$, $p=0.004$) were significant positive predictors. GSPH ($\beta=0.081$, $p=0.332$) and PESHB ($\beta=0.143$, $p=0.073$) were not significant unique predictors in this model.

Table 8: Model Summary of Regression Analysis

Model	R	R²	Adjusted R²	Std. Error
1	.734	0.539	0.530	0.380

Table 9: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	32.721	4	8.180	56.541	**<.001**
Residual	27.973	193	0.145		
Total	60.694	197			

Table 10: Coefficients

Predictor	Unstd. Coeff. (B)	Std. Error	Std. Coeff. (Beta)	t	Sig.
(Constant)	0.363	0.199		1.826	.069

Predictor	Unstd. Coeff. (B)	Std. Error	Std. Coeff. (Beta)	t	Sig.
Awareness (GSPH)	0.069	0.071	0.081	0.972	.332
Personal Engagement (PESHB)	0.113	0.063	0.143	1.802	.073
Perception of CSR (PCSR)	**0.199**	**0.068**	**0.247**	**2.937**	**.004**
Attitudes Towards Policy (ATPG)	**0.340**	**0.066**	**0.436**	**5.163**	**<.001**
Dependent Variable: Future Intentions and Advocacy (FIA)					

4. Discussion

This study provides a seminal assessment of GSPHI-related AAPs among Nepalese management undergraduates. The findings reveal a landscape of strong cognitive endorsement but more moderate behavioral translation.

Students displayed robust awareness of the health impacts of climate change and the cost-saving potential of sustainable healthcare, aligning with global discourse [5, 6,7]. However, awareness of specific government policies was relatively lower, suggesting a gap in applied, policy-specific knowledge. The high scores in the ATPG and PCSR domains indicate that students strongly believe in the necessity of government intervention and corporate accountability for sustainable health outcomes [8, 9, 10, 11]. This presents a fertile ground for educational interventions focused on policy analysis and CSR strategy.

The moderate levels of reported Personal Engagement are consistent with the commonly observed "attitude-behavior gap" in sustainability literature [12, 13]. While students agree with sustainable principles, daily practices like consistent use of sustainable transport or active waste reduction are less entrenched.

The regression analysis offers crucial insight: Future Intentions and Advocacy are most strongly driven by students' Attitudes Towards Policy and Governance and their Perception of CSR's importance, rather than by awareness or current personal behavior alone. This underscores that fostering a sense of professional responsibility and policy efficacy may be more critical for developing future sustainability leaders than simply increasing general knowledge.

Limitations: The use of convenience sampling limits generalizability. Self-reported data are susceptible to social desirability bias. The cross-sectional design precludes causal inference.

5. Conclusion and Recommendations

This study concludes that undergraduate management students in Nepal are cognitively aligned with the principles of GSPHI, particularly valuing strong policy frameworks and corporate responsibility. However, to transform this alignment into effective future advocacy and leadership, educational strategies must move beyond awareness-building.

We recommend:

1. **Curriculum Enhancement:** Integrate specific modules on environmental health policy, sustainable healthcare operations, and CSR strategy into management curricula.
2. **Experiential Learning:** Create hands-on opportunities through campus sustainability projects, internships with green healthcare organizations, and policy advocacy simulations.
3. **Professional Identity Linking:** Explicitly connect GSPHI competencies to future career success and leadership roles in various sectors, emphasizing the strategic value of sustainability.

By doing so, academic institutions can empower the next generation of managers to be proactive architects of a sustainable and healthy future.

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