Sustainability Literacy and SDG Awareness Among DUHS Students

Survey Report for the year 2024-25

1. Survey Overview

This report presents the findings of a sustainability survey conducted among 154 students from various academic programs and years of study at Dow University of Health Sciences (DUHS). The 15-question questionnaire assessed students' awareness of sustainability and the United Nations Sustainable Development Goals (SDGs), knowledge of key sustainability concepts, exposure to sustainability-related education, and preparedness to apply sustainability principles in their future professions.

2. Headline Findings

The findings indicate that students demonstrated a reasonable understanding of general sustainability concepts, but prior awareness of the SDGs and formal exposure to sustainability education were limited.

Measure	Result
Respondents	154 (114 female, 38 male, 2 preferred not to say)
Average knowledge score	4.81 / 7 (SD 1.65; median 5; 95% CI 4.54–5.07)
Perfect score (7/7)	33 students (21.4%)
Scored 3 or lower	34 students (22.1%)
Had heard of the SDGs before the survey	48 students (31.2%)
Attended a sustainability course, seminar or workshop	17 students (11.0%)
SDG topics taught in their own courses	20 students (13.0%); 62 (40.3%) were unsure
Best-answered question	Carbon footprint: 87.7% correct
Lowest-performing question	Identifying the option that is not an SDG: 46.8% correct
Understand how sustainability relates to their field	56.5% agreed
Feel prepared to apply sustainability in their profession	64.9% agreed

3. Survey Methodology

The survey was administered through an online Google Form and remained open from 8 to 29 March 2025. All 15 questions were compulsory; therefore, the 154 submissions contained no missing answers.

The questionnaire covered four areas:

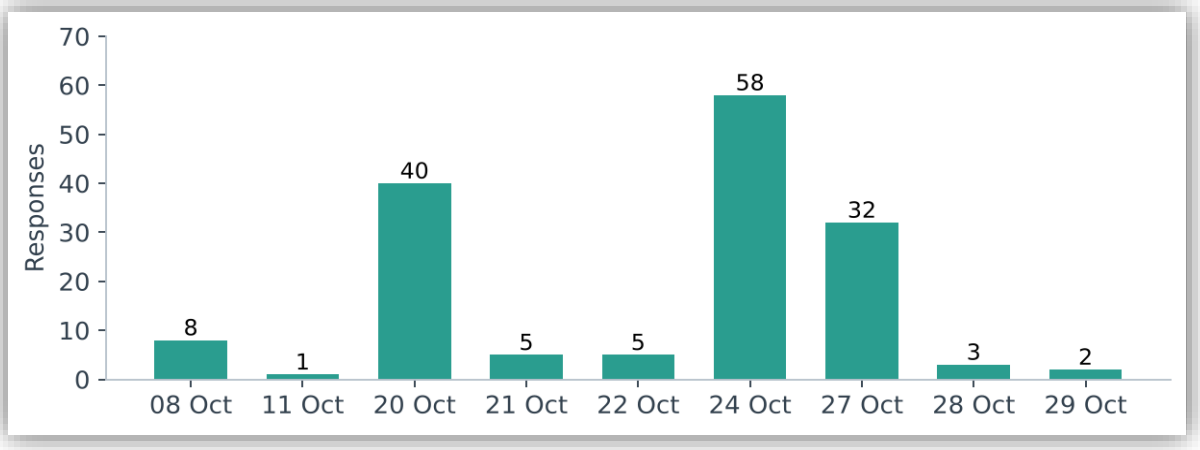
- Background (Q1–Q3): gender, academic program and year of study.
- Exposure (Q4–Q6): prior awareness of the SDGs, participation in a sustainability activity, and whether SDG topics appear in regular courses.
- Knowledge (Q7–Q13): seven multiple-choice questions, each with one correct answer.

- Self-assessment (Q14–Q15): two statements rated from Strongly Disagree to Strongly Agree.

Each correct answer to a knowledge question earned one point, producing a total score ranging from 0 to 7. The answer key is presented below.

Question	Topic	Correct answer
Q7	Which is NOT one of the 17 SDGs?	Global Economic Growth
Q8	Main objective of SDG 13	Take urgent action to combat climate change and its impacts
Q9	SDG closest to public health and medicine	SDG 3: Good Health and Well-being
Q10	A sustainable practice in healthcare	Proper waste segregation and responsible resource use
Q11	Meaning of “carbon footprint”	Total greenhouse gas emissions linked to an activity, person, organization or product
Q12	A renewable energy source	Solar energy
Q13	Global target year for the SDGs	2030

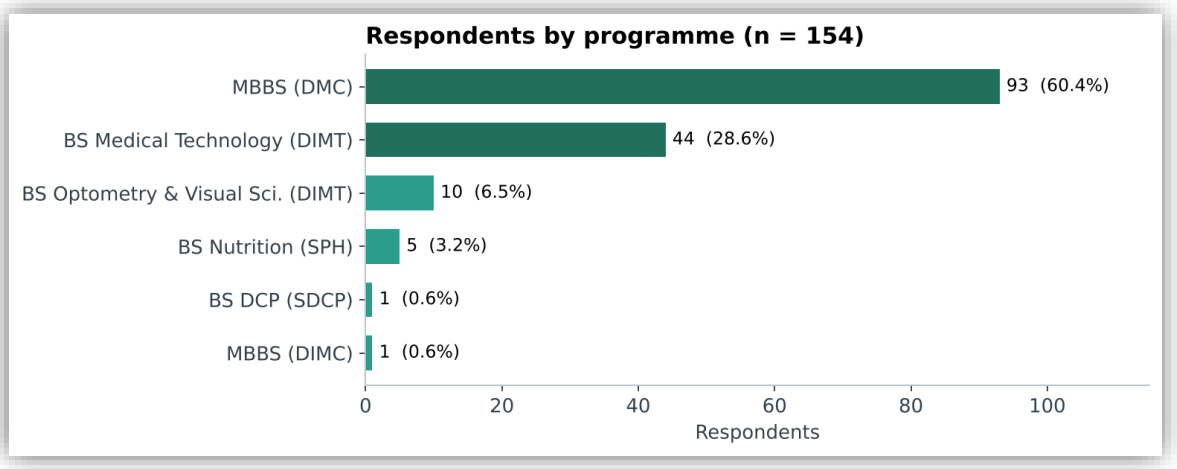
Responses were concentrated on three dates (20, 24 and 27 October), which accounted for 130 of the 154 submissions (84.4%).



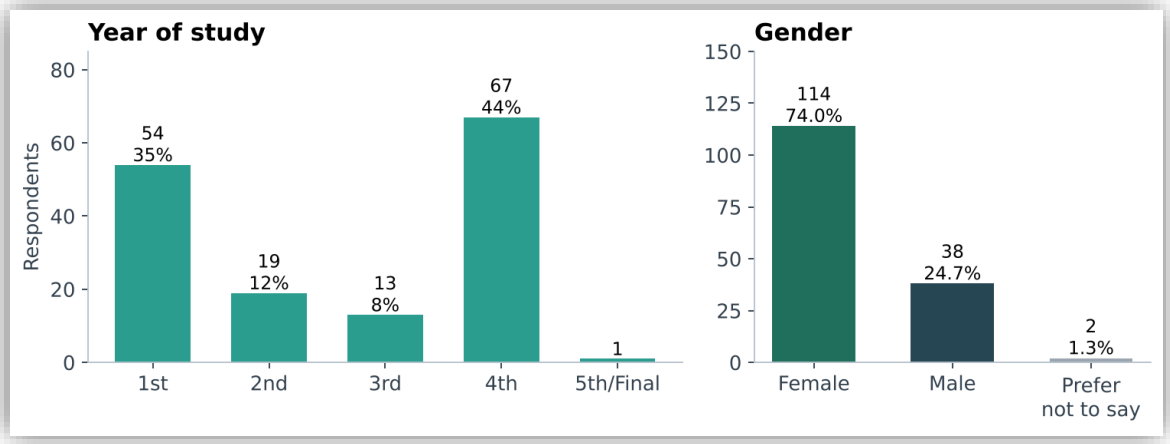
Averages are reported with 95% confidence intervals and percentages with Wilson intervals. Group comparisons used rank-based tests (Mann–Whitney for two groups and Kruskal–Wallis for three or more groups), while relationships were assessed using Spearman correlation. Differences were considered statistically significant at $p < 0.05$. Cohen’s d was used as a rough guide to effect size (approximately 0.2 small, 0.5 medium and 0.8 large). All calculations were based on the exported spreadsheet, with no responses removed.

4. Respondent Profile

The respondent group was predominantly female and comprised mainly MBBS and BS Medical Technology students in first or fourth year. The sample was a convenience sample and should not be treated as representative of the entire University.



The form offered 13 programs. Seven programs received no responses: all three BDS options, DPT, Pharm-D, BS Public Health and BBA. Dentistry, physiotherapy and pharmacy were therefore not represented in the respondent sample.



First- and fourth-year students together accounted for 121 respondents (78.6%).

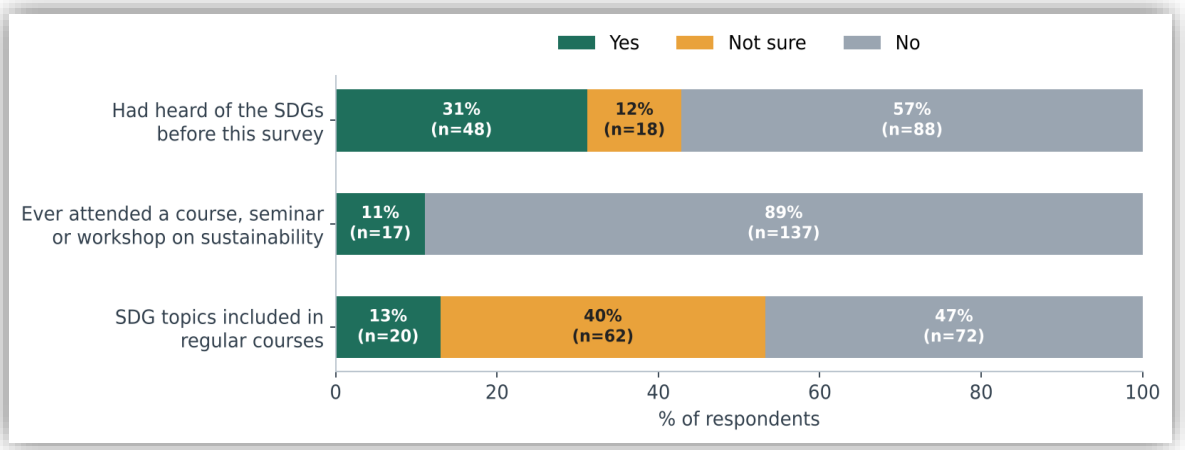
Gender	Number	Share
Women	114	74.0%
Men	38	24.7%
Prefer not to say	2	1.3%

Gender distribution varied across programs. BS Medical Technology respondents included 42 women and 2 men (95.5% female), while MBBS respondents included 57 women, 35 men and 2 undisclosed (60.6% female).

Program and year of study were closely related in this sample. All MBBS responses came from first year (37) or fourth year (57), with no second- or third-year MBBS respondents. BS Medical Technology responses were distributed across all four years (14, 16, 7 and 7). Consequently, apparent year effects may partly reflect program differences, and vice versa.

5. Prior Exposure to the SDGs

Most students had limited prior contact with the SDGs. Fewer than one in three had heard of them, and approximately one in nine had attended a sustainability-related course, seminar or workshop.



The 40.3% of students who were unsure whether SDG topics appeared in their courses suggests that sustainability content may not be clearly identified or signposted in the curriculum.

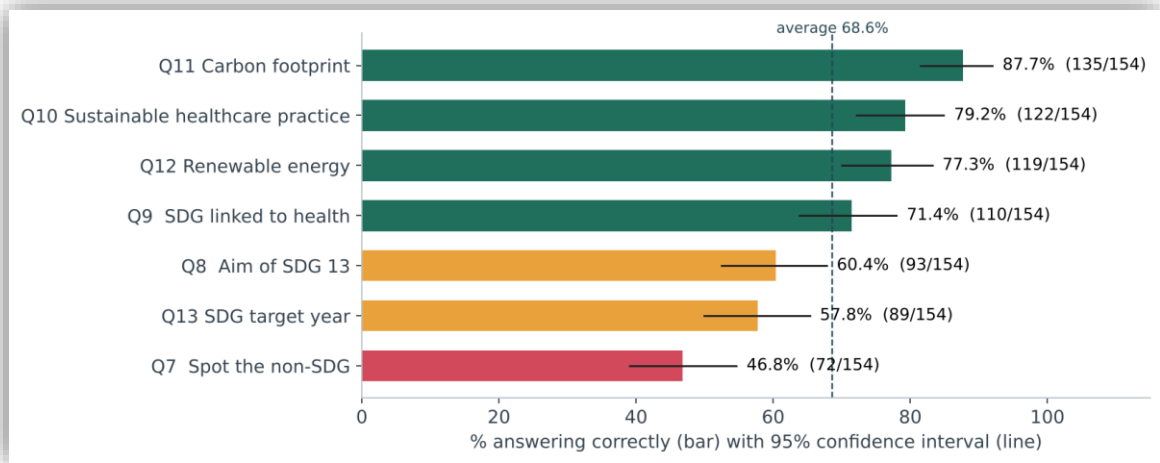
The three exposure routes overlapped to a limited extent. Of the 48 students who had heard of the SDGs, 14 (29.2%) had attended an activity and 16 (33.3%) reported that their courses covered SDGs. Overall, 100 students (64.9%) reported none of the three exposure routes, 30 reported one, 17 reported two, and 7 (4.5%) reported all three.

Group	Students	Had heard of SDGs	SDGs in own courses
MBBS	94	31.9%	12.8%
BS Medical Technology	44	25.0%	6.8%
Other allied programs	16	43.8%	31.2%
All respondents	154	31.2%	13.0%

Awareness was 25.9% among first-year students and 38.8% among fourth-year students; second year was lowest at 15.8%, while third year was 30.8%. Men were more likely than women to report prior awareness (42.1% versus 28.1%). However, differences by program, year and gender were not statistically significant ($p = 0.22$, 0.43 and 0.14, respectively) and should be interpreted cautiously.

6. Question-wise Performance

Performance was stronger on practical, everyday sustainability topics than on questions requiring recall of the SDG framework.



Students performed best on practical sustainability concepts. Nearly nine in ten (87.7%) correctly identified the meaning of a carbon footprint; 79.2% selected proper waste segregation and responsible resource use as a sustainable healthcare practice; and 77.3% identified solar energy as renewable.

For Q9, 71.4% correctly linked SDG 3 with health. However, 44 students selected another goal: 23 chose SDG 11 (Sustainable Cities and Communities), 16 selected SDG 8 and 5 selected SDG 16. This is a notable knowledge gap in a health sciences university.

7. Knowledge Gaps and Reliability of Survey Results

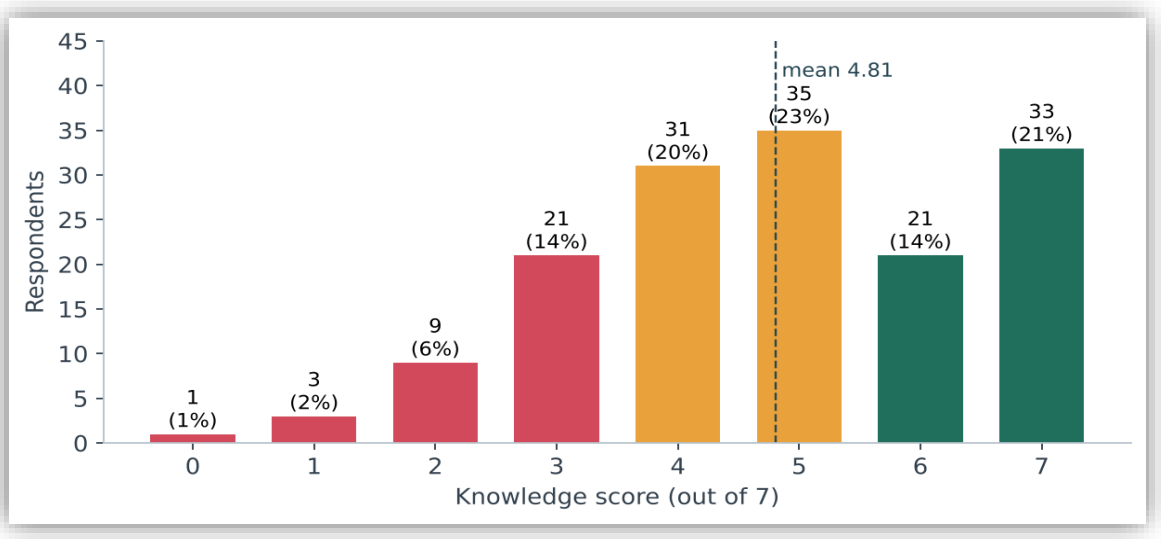
Q7 was the most challenging item, with 46.8% answering correctly. The wording may have contributed to the difficulty because the correct option, “Global Economic Growth”, closely resembles the actual SDG 8 title, “Decent Work and Economic Growth”. Questions 8 (60.4%) and 13 (57.8%) also indicate gaps in understanding the purpose of SDG 13 (Climate Action) and the 2030 target year.

All seven questions correlated positively with the total score of the other questions (0.22–0.34). Q13 and Q8 were the strongest items for distinguishing between students with higher and lower knowledge scores. Internal consistency was modest (KR-20 = 0.57), so individual scores are best interpreted as broad performance bands rather than precise measurements.

8. Overall Sustainability Knowledge Scores

The average score was 4.81 out of 7 (68.6%; 95% CI 4.54–5.07). The median and most common score were both 5. Scores ranged from 0 to 7, with a standard deviation of 1.65.

Most students scored in the middle range: 31 students scored 4 and 35 scored 5. A further 33 students (21.4%) achieved a perfect score of 7/7.



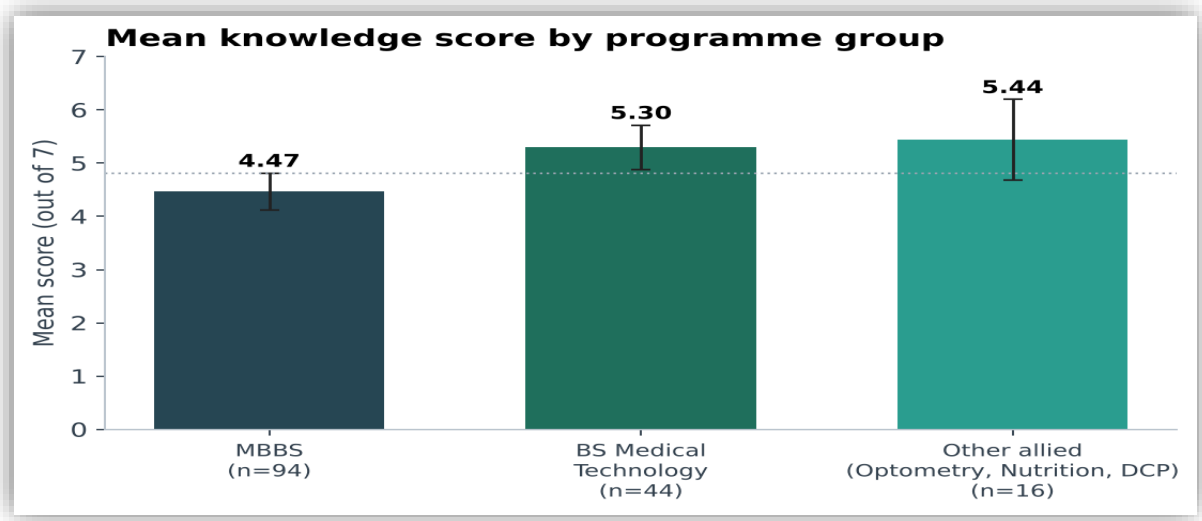
In total, 89 students (57.8%) scored 5 or better, while 34 (22.1%) scored 3 or lower. The survey did not establish a pass mark; these bands are descriptive only.

Perfect scores were recorded among 16 MBBS students (17.0% of MBBS respondents), 11 BS Medical Technology students (25.0%) and 6 students from other allied programs (37.5%). Twelve perfect scorers were in fourth year and 11 in first year. Eighteen of the 33 perfect scorers (54.5%) had heard of the SDGs before the survey. At the lower end, 11 of the 13 students who scored 2 or lower were MBBS students.

9. Comparative Analysis of Knowledge Scores

Knowledge scores varied by academic program and prior exposure. Gender differences were negligible. Year-of-study comparisons require caution because program and year were not evenly represented.

9.1 By Academic Program



The overall difference between the three program groups was statistically significant (Kruskal–Wallis p = 0.005). MBBS students scored 0.83 points lower than BS Medical Technology students (p = 0.004; d = 0.51, a medium effect) and 0.97 points lower than students in other allied programs (p = 0.039). Within the allied group, the five Nutrition students averaged 6.40 and the ten Optometry students averaged 5.10; these small numbers should be interpreted cautiously.

9.2 By Prior Exposure

Students who had heard of the SDGs averaged 5.56, compared with 4.39 among those who had not. Students who had attended a sustainability-related activity averaged 5.76, compared with 4.69 among those who had not. Average scores also increased with the number of exposure routes reported: 4.45 among students reporting none and 6.29 among those reporting all three.

9.3 By Gender

Women averaged 4.81 and men averaged 4.87; the difference was not statistically significant (p = 0.98).

9.4 Confidence and Preparedness

Confidence generally followed knowledge scores. Students who reported that they were not prepared averaged 3.43, while those who reported that they were prepared averaged 5.09. However, 10 of the 74 students who agreed with both confidence statements scored 3 or lower.

The source report does not provide a complete comparative analysis of knowledge scores by year of study. Accordingly, no year-wise knowledge-score comparison has been added.

10. Conclusion

The survey indicates that DUHS students have a fair understanding of practical sustainability concepts but limited awareness of the United Nations Sustainable Development Goals (SDGs). Although the average knowledge score was 4.81 out of 7, only 31.2% of students had heard of the SDGs before the survey, and just 11.0% had attended a sustainability-related course, seminar or workshop.

Students demonstrated stronger knowledge of carbon footprint, healthcare waste management and renewable energy. However, gaps remain in their understanding of the SDG framework, particularly SDG 13 (Climate Action) and the 2030 targets. The findings also suggest that SDG-related content has limited visibility in regular academic courses.