

# A STUDY ON THE LEVEL OF AWARENESS AND ADOPTION OF SUSTAINABLE PRACTICES AMONG UNDERGRADUATE STUDENTS

**Ms. Chithra J**

*Assistant Professor, Department of Commerce and Management*

*Vijaya Vittala Institute of Management and Science, Bengaluru*

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## **Abstract**

*Global priority has changed towards more sustainability-related things, and higher education institutions are charged with creating environmentally-conscious youth. Thus, this research measured undergraduate students overall knowledge about sustainability and their actual behaviours related to practicing sustainability. In measuring this awareness and behaviour, the students understanding of basic sustainability concepts will be examined along with evaluating their frequency of utilizing environmentally-sound practices during their daily lives. To collect primary data for purpose of this study, a structured questionnaire was distributed to undergraduate students from multiple disciplines to assess their level of sustainability awareness (including waste management, conserving energy, conserving water, and consuming sustainably, along with how often they performed every respective behaviour). Descriptive statistics were also used create a profile of relationships and differences between awareness and behaviour demonstrating that; although the majority of respondents had moderate to high levels of awareness of sustainability-related issues, consistent sustainable behavioural practices were much lower. Factors such as convenience, peer pressure, institutional support, availability of sustainable products/options affected students level of sustainable practices. As such, additional efforts are necessary to increase awareness through additional programming, curriculum integration, and initiatives at the institutional level to ultimately create a more sustainable higher education institution.*

**Keywords:** *Sustainability, Sustainable Development, Environmental Awareness, Undergraduate Students, Green Practices*

## **Introduction**

There is an increasing concern for sustainability with regards to the environment, the depletion of resources, as

well as the negative impacts from climate change worldwide. An education system can provide students with the opportunity to develop a sense of responsibility towards

the environment. The undergraduate students of today will be the professionals of tomorrow and will also be responsible for making decisions that will determine how sustainable development will be approached in the future.

It is vital to understand how aware students are and to what extent they are practicing sustainability in order to develop environmentally responsible practices in a sustainable manner. This research looks to measure undergraduate students' understanding of sustainability concepts, as well as compare and contrast their knowledge of sustainability with their ability to implement eco-friendly behaviours into their daily lives.

### **Meaning of Sustainability**

Sustaining our planet, known as sustainability, is ensuring the kind and quality of natural resources used today meet the needs of both present and future generations.

### **Importance of Sustainable Development Goals (SDG'S)**

- Create an all-encompassing International Framework for Resolving Global Social, Economic, and Environmental Issues.
- Aid in Reducing Global Poverty and Improving Living Conditions.

- Improve Quality of Education, Health and Gender Equality.
- Encourage Responsible Use of Natural Resources Through Environmental Stewardship.
- Support Inclusive Economic Development and Provide Decent Employment Opportunities.
- Encourage International Cooperation and Shared Accountability.

### **Role of Youths in Sustainable Development**

- Environment Awareness
- Sustainable Lifestyle Practices
- Innovation and Entrepreneurship
- Engagement in Advocacy and Policy Development
- Community Engagement

### **United Nations Sustainable Development Goals**

The United Nations, in 2015, framed 17 Sustainable Development Goals (SDGs) in order to facilitate sustainability at a global level.

1. The SDGs seek to address the biggest problems experienced on a global scale: poverty, hunger and malnourishment, gender inequality and discrimination, climate change and degradation of the environment, peace and security, and social justice.

2. The SDGs are linked with the understanding that improvement made in single area affects other areas. Furthermore, the SDGs address the need to balance the triple areas of development, e.g. economic development, social inclusion, and protection of nature.
3. All of the Sustainable Development Goals have specific targets and measurable indicators to monitor progress both domestically and internationally – as well as provide accountability.
4. Achieving the Sustainable Development Goals requires collaboration and cooperation from public sector, as well as private sector.
5. The SDGs call for governments to develop methods and tools to ensure that all people benefit from the sustainable development process (i.e. "Leave No One Behind")
6. Global implementation of the SDGs will be measured by 2030 in accordance with the Global 2030 Agenda for Sustainable Development.

### **Importance of Environmental Responsibility in Higher Education**

1. Development of environmental awareness and ethical values.

2. Integration of sustainability into academic curriculum.
3. Promotion of eco-friendly campus practices.
4. Encouragement of research and innovation in environmental studies.
5. Preparation of socially and environmentally responsible professionals.

### **Review of Literature**

- **Tasneem Alsaati, Samir El-Nakla & Darin El- Nakla (2020)**: The results show a general lack of knowledge and understanding of sustainability by most students (including being aware of it through education). For example, the majority of students were only somewhat aware of sustainability in terms of things such as recycling or conserving energy
- **Sharifah Nurlaili Farhana Syed Azhar et al. (2022)**: This study evaluated undergraduate students' views and opinions regarding sustainability on the college campus. The results indicate that there are moderate to high levels of positive feelings and beliefs about sustainability among undergrads at this institution.
- **Eleonora Concina & Sara Frate (2023)**: This review highlights how

sustainability content and strategies in university curricula can raise awareness and foster positive student attitudes towards sustainability.

- **Huda Najeehah Mohamad Maliki & Kamisah Osman (2024)**: The purpose of this research was to conduct a meta-analysis of existing literature on student knowledge and behaviours towards sustainability using empirical data from 2017 - 2023. The results indicated that students tend to be well aware of the Sustainable Development Goals (SDGs).
- **Zakaria et al. (2024)**: This study examined students' different levels of engagement and the effects that their sustainable practices have on them. It gave insight into the role that different levels of awareness and engagement have on the adoption of environmentally friendly behaviours.

### Research Gap

In reviewing the literature cited above, it is evident that there has been significant focus placed on students' sustainability knowledge, attitudes, and perceptions; however, there has been limited research examining students overall awareness and the corresponding behaviours that demonstrate students' implementation of these sustainability practices concurrently,

particularly among undergraduate students. Additionally, many studies remain limited in their generalizability since the majority of them only use systematic reviews or have a very specific institution or geographic area. Even though the consciousness-to-practice gap is well known, there has not been enough empirical study of whether or not an individual student's awareness affects his/her practical implementation of sustainable behaviours on a daily basis.

### Statement of the Problem

Sustainability has become a major concern worldwide, yet the role of undergraduate students in practicing sustainable behaviours remains uncertain. Although students are exposed to environmental education and sustainability concepts, their actual level of awareness and implementation of such practices is not clearly understood. There appears to be a gap between knowledge of sustainability and its practical application in daily life. Limited studies have comprehensively measured both awareness and adoption levels within a specific undergraduate group.

### Objectives for the Study

- To evaluate the level of awareness of sustainable development concepts among undergraduate students.

- To examine students understanding of natural issues such as change of climate, contamination, conservation of natural resources, recycling, as well as waste management.
- To examine the adoption of sustainable practices in daily life.
- To analyze students participation and involvement in environmental awareness programs and sustainability-related activities within the college.
- To determine the relationship between awareness and actual sustainable behaviour among undergraduate students.

### Limitations

- Time Constraints.
- The research is related to the students of a particular institution only.
- The study is based on self-reported data subject to response bias.
- The sample size is relatively limited.
- The research focuses mainly on selected aspects of awareness and practices, excluding other dimensions of sustainability.

### Scope of the Study

This study is undertaken to gain insights how much knowledge there is about sustainability, as well as how much

evidence of sustainable behaviour exists for students. This study will focus on the knowledge that students have regarding not only sustainable development concepts and environmental issues, but also how well they know about conserving resources. In addition, this study will assess how students are putting eco-friendly behaviours into practice, such as conserving energy or water; separating waste for recycling; and reducing their consumption of plastics, without regard to demographics.

### Research Methodology

- **Research Method:** Descriptive research method.
- **Sampling Technique:** Convenience sampling.
- **Sample size:** 110 respondents (Undergraduate students from B.Com, BBA , BCA) .
- **Primary Data:** Primary data is collected through a structured questionnaires, surveys and interviews with the UG students.
- **Secondary Data:** Secondary Data will be collected from literature reviews and reports will supplement the analysis.
- **Sampling Unit:** Undergraduate Students of the Institution.

- **Data Analysis:** Percentage Method and Charts Analysis through MS Excel.

### Data Analysis

**Table 1 Awareness Rating of Students towards the Concept of Sustainable Development**

Particulars	No of Respondents	Percentage
Not aware	21	19.1%
Slightly aware	71	64.5%
Moderately aware	12	10.9%
Well aware	6	5.5%
<b>Total</b>	<b>110</b>	<b>100</b>

**Source:** Author's own contribution

**Analysis:** Respondents mostly were somewhat familiar with sustainable development; of the 110 surveyed respondents, 71 were somewhat aware for a percentage of 64.5%. 21 students (19.1%) claimed they had no knowledge of the topic, signalling a substantial gap in fundamental education. 12 respondents (10.9%) indicated they had moderate awareness about sustainable development; only 6 students (5.5%) stated they had high levels of awareness. Overall, there seems to be very little awareness of the subject; undergraduates need more access to education on sustainable development to increase their level of understanding.

**Table 2 Frequency of Students Switching Of Electrical Appliances When Not in Use**

Particulars	No of Respondents	Percentage
Never	22	20.2%
Rarely	56	51.4%
Sometimes	25	22.9%
Often	7	6.36%
<b>Total</b>	<b>110</b>	<b>100</b>

**Source:** Author's own contribution

**Analysis:** According to the data, about half of the surveyed individuals (56 of 110) said that they seldom switch off electrical devices when they are not in use. Whereby approximately 22 (20.18%) of respondents never turn off electrical devices when they are not being used, 25 (22.93%) usually do so, and only 7 (6.36%) frequently switch off electrical devices.

**Table 3 Engagement of Undergraduate Students in Environmental Awareness Initiatives**

Particulars	No of Respondents	Percentage
Yes	64	58%
No	46	42%
<b>Total</b>	<b>110</b>	<b>100</b>

**Source:** Author's own contribution

**Analysis:** According to the table, of the 110 participants surveyed 58 % (64) had

actively engaged in environmental awareness programs presented by the college, whereas only 42 % (46) stated they did not participate in any type of environmental awareness program that the college offers.

**Table 4 Primary Environmental Concern Identified by Undergraduate Students**

Particulars	No of Respondents	Percentage
Climate change	56	51.4%
Pollution	25	22.9%
Deforestation	16	14.7%
Water Scarcity	13	11.8%
<b>Total</b>	<b>110</b>	<b>100</b>

**Source:** Author's own contribution

**Analysis:** According to the research conducted, over 50% (51.4%) identified that climate change is their environmental concern; thus, there is a strong level of awareness of international environmental difficulties. Pollution was the second most significant environmental concern (22.9%), emphasising an immediate environmental problem. Deforestation (14.7%) and water shortage (11.8%) received lower responses comparatively. The data indicate that students are more aware of international climate difficulties compared to other environmental issues.

**Table 5 Level of Students' Willingness to Adopt Sustainable Lifestyle Changes**

Particulars	No of Respondents	Percentage
Not willing	24	22.2%
Slightly willing	61	56.5%
Moderately willing	17	15.7%
Highly willing	8	7.27%
<b>Total</b>	<b>110</b>	<b>100</b>

**Source:** Author's own contribution

**Analysis:** More than half of those surveyed (56.5 %) have a small degree of readiness to change their living habits in support of sustainability, showing a foundational but moderate commitment. Conversely, 22.2 per cent are not prepared to make any efforts to do so; therefore, there is some degree of resistance or lack of motivation. The majority of respondents (15.7 per cent) have some readiness to change, while only 7.27 per cent have a high level of readiness to do so.

**Table 6 Familiarity of concept of Sustainable Development among Students**

Particulars	No of Respondents	Percentage
Strongly Disagree	38	34.5%

Disagree	45	40.9%
Neutral	10	9.09%
Strongly Agree	10	9.09%
Agree	7	6.36%
<b>Total</b>	<b>110</b>	<b>100</b>

**Source:** Author's own contribution

**Analysis:** From this analysis, it can be seen that significant numbers of respondents do not know about sustainable development; in particular (as reflected in the table), 40.9% disagreed and 34.5% strongly disagreed that they were familiar with it, indicating that the majority of respondents were not aware of the concept of sustainable development.

**Table 7 Frequency of Student Participation in Sustainability-Related Activities**

Particulars	No of Respondents	Percentage
Never	63	57.2%
Once a year	28	25.45%
Occasionally	11	10%
Frequently	8	7.27%
<b>Total</b>	<b>110</b>	<b>100</b>

**Source:** Author's own contribution

**Analysis:** As demonstrated by the table, many individuals report having participated in sustainability related activities at a low frequency (57.72%), indicating that overall engagement is very low. An additional 25.45% of respondents have participated

once a year demonstrating that they occasionally engage in sustainability related activities. The remaining 10% of respondents indicated they occasionally engage while 7.27% participate frequently.

**Table 8 Barriers Faced by Students in Practicing Sustainable Behaviours Regularly**

Particulars	No of Respondents	Percentage
Lack of awareness	19	17.27%
High Cost	43	39.09%
Lack of institutional support	23	20.9%
Lack of time	25	22.7%
<b>Total</b>	<b>110</b>	<b>100</b>

**Source:** Author's own contribution

**Analysis:** From the above data, high cost is the greatest barrier to students adopting sustainable practices by 39.09% of participants, Time constraints (22.7%) and insufficient support from their institution (20.9%) also represent significant structural and academic pressures on the students attempting this adoption of sustainable practices. Knowledge barrier also accounted for 17.27%, indicating an important need for improved communication and education related to the environment.

## Major Findings

1. Almost all undergraduate students lack knowledge on the principles of sustainable development; therefore, there is an urgent need for improved educational programs aimed at this topic.
2. There seems to be little consistency among students regarding energy conservation behaviour, with the majority of students indicating that they do not routinely turn off electrical devices when they are not in use. Hence, there is a need to promote sustainable consumption practices as part of the responsible use of energy.
3. While the majority of respondents to the survey indicated that they had participated in sustainability-related activities at some level, many have not done so, therefore, there is a need for broader outreach to involve more students in the sustainability movement.
4. The majority of students believe climate change is the greatest environmental concern globally, while pollution was viewed as the second greatest environmental issue. There is a wide variation between the number of survey respondents who believe deforestation and water scarcity are the major environmental concerns.
5. There are many respondents who expressed that they have some level of willingness to change their behaviour in order to promote sustainability; however, the number of respondents who expressed an intention to make behavioural changes to promote sustainability was fairly low, indicating little overall commitment to living sustainably.
6. The research shows that a lot of respondents did not know about the sustainable development when they were surveyed. Many students reported that they were not aware of what sustainable development.

## Suggestions

1. Integration of sustainability concepts into college courses and regular workshops would improve students understanding of these concepts.
2. Students can be encouraged to develop responsible behaviour patterns by implementing awareness campaigns and practical energy conservation initiatives.
3. Colleges should establish more interactive environmental programs that will reward colleges for encouraging student participation.
4. Educational programs related to various environmental issues will allow students to think of sustainability

from more than just a climate change perspective.

5. Student-led sustainability committees, campaigns and recognition for environmentally responsible behaviour are all ways to increase motivation.
6. The institution have to conduct workshops, seminar and awareness programs regarding sustainability practices.

### Conclusion

Research has shown that undergraduate students have some knowledge about sustainability development, but they have a low to moderate level of global awareness and contribution to global sustainability development. Overall, while many undergraduate students have a moderate level of concern about global environmental issues, they do not consistently implement sustainability practices in their daily lives. Environmental action by undergraduate students is beneficial; however, this type of action is inconsistent. Therefore, more outreach programs are needed. Financial considerations are the greatest barrier to sustainable action implementation, followed by time and lack of institutional support. The time and resource gap that exists between sustainability awareness and sustainability action indicates that a structured educational program and incentive program is needed. Educational

institutions can provide structured educational programs, including coursework integration examples, and a variety of options to engage students in sustainable action and develop policies that will support sustainable action.

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