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KNOWLEDGE, AWARENESS AND ATTITUDE OF BUSINESS ADMINISTRATION STUDENTS TOWARDS SUSTAINABLE DEVELOPMENT AND SUSTAINABILITY IN NCR (INDIA)

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ABSTRACT
The Sustainable Development Goals (SDGs) are essential for students to cultivate attitudes and behaviours that foster sustainability and tackle environmental issues. The Sustainable Development Goals (SDGs) are an essential component of the global development framework known as the 2030 Agenda. This agenda brings together individuals to address inequality, guarantee access to essential education, address climate change, and eradicate poverty. Achieving these goals is linked to guaranteeing essential societal requirements, such as top-notch healthcare, social security, education, and job opportunities for all citizens, to promote comprehensive economic growth. It is envisaged that most people should be familiar with the SDGs, understand their importance, and develop plans to integrate them into their personal and professional life in order to achieve these global objectives. This study examines the effects of an NCR Delhi business administration curriculum that emphasizes sustainability and behaviour change throughout. The questionnaire has 53 items, 31 of which touch on SDG basics, including terms, indicators, models/documents, and international authorities/agencies. The 22-item evaluation measured knowledge, attitudes, behaviours, normative influences, and future self-efficacy. These measures followed an exam to assess sustainability knowledge. The extreme positions were "strongly agree" and "strongly disagree" on a five-point Likert scale. Male and female students' knowledge, awareness, behavioural attitudes, and sustainability attitudes were assessed using the t-test. An analysis of variance (ANOVA) was conducted to determine student age group differences. A thorough understanding of SDGs and sustainability is best achieved through self-study or higher education. This paper presents a systematic strategy for academic institutions to efficiently intervene and improve education for emerging professionals in line with the SDGs, 2030 Agenda, and sustainable development.

Keywords: *Knowledge, Attitudes, Sustainability, Behavior, Student, Curriculum, India*

INTRODUCTION
Sustainable development (SD), which first emerged in the ancient agrarian economy era, refers to the balance between human survival and agricultural progress. The population and productivity have grown significantly since the beginning of the Industrial Revolution. In addition to using nature's abundance, humans have been progressively increasing the amount of garbage and toxins released into the environment. Because of the ongoing and rapid changes in the education environment with artificial intelligence brought about by human activity, maintaining worldwide systems that sustain life has grown more challenging (Kates & Parris, 2003). Improving the competitiveness and efficiency of education has become essential due to the educational reforms that have aligned the environment with the global landscape. Determining appropriate means of implementing environmental-based education at the college and university level is a critical but contentious aspect of the 2030 Agenda for Sustainability, including the Sustainable Development Goals (SDGs) (UN, 2021). The educational environment was more persuasive than the attempts of wealthy countries to limit it to an unrelated objective in developing countries. Wealthy nations highlighted the need to expand domestic funding sources for education and the participation of the private sector in each country. In contrast, developing nations with financial constraints emphasize the necessity of education and obtaining assistance from other countries to make a sound educational policy.

At the same time, the world is dealing with growing issues, including food scarcity, the energy crisis, the degradation of the environment, a deteriorating 'ecological crisis,' slower economic growth, and escalating social turmoil in information technology (Yeheyis et al., 2013). These issues have compelled humanity to reconsider its place in the ecosystem and look for alternative means of long-term growth and survival (Yarime et al., 2012). In this setting, the idea of SD arose and developed into a key tactic to direct the global socioeconomic revolution (Zelenika et al. 2018). The SDGs, which enlarged the reach and vision of the Millennium Development Goals (MDGs) and required every country to commit to action on par with the others, were adopted during a historic UN meeting in September 2015, which brought together almost 200 nations. The SDGs are part of the global development agenda known as the 2030 Agenda, which brings people together to fight inequality, provide basic education, address climate change, and eradicate poverty. Achieving these goals correlates with providing social essentials, including quality healthcare, social security, education, and work

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opportunities for all people, with the goal of inclusive growth (UNESCO, 2019). It is projected that most people will be familiar with the SDGs, comprehend their importance, and find methods to integrate them into their professional and private lives to achieve these global objectives. SDGs must be important for students in inculcating attitudes and behaviours towards sustainability and environmental concerns. Nonetheless, participation from the public and commercial sectors and intellectual, scientific, and educational institutions is also required (Yarime et al., 2012). With particular reference to a necessarily shared course of action on gender equity, health, and education, this commitment needs to be converted into international partnerships that demonstrate multisector collaboration and the involvement of society at all levels (Zelenika et al., 2018).

The first prerequisite for achieving this kind of involvement is having sufficient knowledge of sustainability themes and the goals of the 2030 Agenda. While everyone can contribute to the strategies being implemented to realize the SDGs, professional intervention from stakeholders in any field is necessary to raise the profile of sustainable development at the national and international levels. UNESCO has confirmed the need for a good education, especially post-secondary education, to understand and carry out the SDGs. Although there has been a recent rise in interest in "greening" business school curricula (Holt, 2003; Jabbour, 2010), there are still plenty of areas to incorporate sustainability into Business School Programmes (Naeem & Neal, 2012). Furthermore, a growing corpus of writing outside of Business Schools criticizes and applauds the achievements of incorporating sustainability concepts into subject-specific and trans-disciplinary education. To encourage students to solve problems in the real world that come with living in a resource-constrained and environmentally conscious world, for instance, stress the significance of helping them acquire "sustainability literacy," which is characterized as a set of transferable skills, attitudes, competencies, dispositions, and values that go beyond traditional educational settings.

This book chapter is organized into five sections. Section 2 will be related to the literature review and theoretical framework. Section 3 deals with materials and methods of the research that is related to SDGs and Sustainability. Section 4 provides evidence of the results and discusses the SDGs and sustainability. Section 6 is the conclusion and policy recommendation based on the results.

SECTION 2

2.1 Review of Literature and Theoretical Framework

Bloom's taxonomy outlines a series of domains that gradually lead to competence, beginning with bare awareness, defined as being aware of something without necessarily implying interest, and knowledge, which can be seen as a step further because it denotes familiarity with something. Recalling leads to comprehension, application, analysis, assessment, and invention. Miller developed a complement framework, viewing competency as a series of steps that advance from "knowing" to "knowing how," "showing how," and "doing" that show the effectiveness of the Programme at ground level. It is mentioned how to train and evaluate students who possess sustainability and social responsibility competencies. According to the theories above, every competence must eventually be tested to "prove" a capacity in performance; this implies that there will be competition in the educational setting. In another way, the educational setting may be the best for ensuring the quality of instruction and providing incentives for demonstrating mastery of the learned skills, leading to the successful integration of information, abilities, attitudes, and values. The basis of successful learning strategies appears to be a clear understanding of the knowledge and attitude foundation from which students start studying the themes and how studies alter their knowledge, attitudes, and beliefs over time (Buissink-Smith et al., 2011; Stubbs & Schapper, 2011). These studies have not tracked long-term effects, and some data points to the possibility that students' actual behaviours may diverge from a sustainable attitude after they reach the workforce (Kuckertz & Wagner, 2010). This is an area that is actively being researched and needs additional study. Shephard (2008) argued that students' cognitive and emotional learning domains were where they learned their information, attitudes, and behaviours related to sustainability. Shephard (2008) asserts that the emotive domain is linked to values, attitudes, and behaviour, while cognitive learning is more closely associated with information. Previous to that, Laroche, Bergeron, and Barbaro-Forleo (2001) also stated that students' comprehension of SD and the environment is demonstrated by their capacity to recognize ideas and patterns of behaviour associated with sustainability, in addition to environmental issues and potential solutions. Interestingly, research by Bamberg and Moser (2007) and Bartiaux (2008) showed that student behaviour changes are not always an immediate result of increased understanding. Following this, it was discovered by Vermeir and Verbeke (2006) and Vicente-Molina et al. (2013) that attitudes do not significantly contribute to the explanation of pro-environmental behaviours. According to Milfont and Duckitt (2010), environmental attitude is a psychological predisposition expressed through a favourable or unfavourable assessment of the natural environment. While knowledge, attitude, and behaviour may not always follow a straight relationship,

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certain studies (Hsu, 2004) suggested that people's environmental behaviour reflects their environmental knowledge. Ultimately, Vicente-Molina et al. (2013) concluded that, given the existence of outside influences on human behaviour, knowledge is a necessary but inadequate prerequisite for pro-environmental behaviour.

It has been demonstrated that the institutional structure, school processes, research, promotion and collaboration, on-campus experiences, evaluation and reporting, and education are the minimum number of components that affect sustainability in higher education (Lozano et al., 2013) . The difficulties of implementing tactics for a more sustainable environment in academic settings have already been extensively studied. This study addresses many issues, challenges, and concerns that must be considered when creating sustainability-focused environments in higher education, including involvement, awareness, knowledge, values and beliefs, norms, behaviours, and dispositions. When evaluating these characteristics in earlier research, the authors sometimes disagreed on which aspect is most important in an academic setting and produced inconsistent data. Any behaviour modification messages incorporated into the curriculum will be subjected to contradictory messages, peer and family social encouragement or discouragement, and actual and perceived behavioural norms (Peattie & Peattie, 2003). Through socialization and influence, families are recognized to impact teenagers' ecologically relevant behaviours. Since research has concentrated chiefly on under-18-year-olds living at home, the magnitude or duration of this influence is unknown (Grønhøj & Thøgersen, 2009).

This study evaluates students' general awareness, environmental knowledge, and attitudes towards the SDGs and sustainable development for learning at the Indian Business School. The following are secondary goals by determining the information sources used to develop competencies related to the Sustainable Development Goals (SDGs) and sustainable development; identifying expectations for academic sustainability education; predicting higher awareness, knowledge, and more sustainable attitudes among students; evaluating specific knowledge gaps or barriers to the implementation of sustainable actions.

SECTION 3

3.1 Materials and Methods

This research examines the effects of a business administration curriculum in NCR Delhi that integrates significant sustainability and behaviour change issues at every programme stage. The research gap was inspired by gaps in research identified in the literature review. Students enrolled in the academic year before a curriculum change were questioned to gather insight into the possible impacts of curriculum modifications. The surveys served as the curriculum's effects can be evaluated for the business administration programmes. This initial study phase aims to set baselines for students perceived personal significance of sustainability issues and their current knowledge, attitudes, and perceptions of norms. The creation of campus enforcement, including choice of wording and means of communication, will be guided by the findings of this phase of the study. The questionnaire consists of 53 items, of which 31 items are related to the basics of the SDGs terms, indicators, model/documents, and international authority/agency. 22 items cover a range of knowledge, attitudes, behaviours, and normative influences, as well as perceived self-efficacy regarding the future, which came after a test to determine familiarity with key concepts related to sustainability.

A five-point Likert scale was employed for the assertions, with strongly agree and strongly disagree as foundational positions. After these remarks, there were other open-ended questions on the advantages, rewards, and steps that may be taken to modify behaviour. There was clear good internal consistency (0.91). There was also another series of prompts that asked respondents about a variety of sustainability and climate change-related topics. The questionnaire was given to sample business administration students in NCR Business Schools. All students who entered the institution for the 2023-24 academic year, only for the business administration department, were targeted by the survey for a business administration programme. The survey includes students engaged in master's programs, doctoral programs, and specialized courses. Both the teaching staff were excluded. It was decided only to consider business administration students to assess current awareness, knowledge, and attitudes about sustainability themes that correspond with the background currently provided by secondary schools where sustainable development was included as book chapters. The significance of male and female students' knowledge, awareness, behavioural attitudes, and attitudes toward sustainability was evaluated using the t-test. To determine the significance of the differences between different age groups of student’s, an ANOVA was employed.

3.2 Demographic Description

Male student's responses are more prevalent in all cities, with New Delhi having the greatest proportion (28.25%) and Gurugram having the lowest percentage (19.25%). New Delhi has the highest rate. The greatest percentage is found in New Delhi. The percentages of female respondents are consistent throughout all

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cities, ranging from 24.19% in Noida to 26.05% in Sonipat. This is something that can be claimed about the distribution of female respondents. Noida has the highest proportion of people under the age of 20 (30.5%), whereas Sonipat has the lowest presence (20.57%) and Noida has the highest percentage of persons under the age of 20 (30.5%). It is possible to observe a distribution that is comparable among cities for the age range of 20 to 28 years old, with Gurugram and New Delhi exhibiting considerably higher percentages than the other cities. There is a substantial population of persons aged 29 to 36 years old in Noida (30.43%) and Sonipat (27.83%). Both of these cities have a population of students. Gurugram and Noida have an equal number of males and females aged 37 to 45. Sonipat and New Delhi, on the other hand, have a higher percentage of persons in this age range than Gurugram and Noida. Noida has the largest percentage of individuals aged 46 and over (31.58%), while Gurugram has the lowest rate (20.18%). Both cities are located in the Indian state of Uttar Pradesh. While New Delhi has the largest percentage of students enrolled in the Bachelor of Business Administration program (33.73%), Gurugram has the lowest rate, 18.07%. Sonipat has the lowest concentration of MBA students (17.48%), whereas Gurugram has the greatest concentration of MBA students (27.97%). When compared to Noida (19.25%), New Delhi has the greatest concentration of students in the Postgraduate Diploma in Management (PGDM) program. Sonipat has the highest percentage of students who are pursuing a doctoral degree (28.97%), while Gurugram has the lowest percentage (20.69%) of students in this category. While Noida has a fairer distribution across various criteria, New Delhi has a stronger representation of younger age groups and students pursuing a Bachelor of Business Administration degree. In general, New Delhi has a higher percentage of students in the younger age groups. Numerous patterns can be observed in both Gurugram and Sonipat. One of these patterns is that some age groups and academic levels notably differ from every other group.

Table 1 Descriptive Summary of Samples

Gender		**Noida**	**Gurugram**	**Sonipat**	**New Delhi**
	Male	120	77	90	113
	Percentage	30	19.25	22.5	28.25
	Female	52	53	56	54
	Percentage	24.19	24.65	26.05	25.12
Age Group	Below the Age of 20 Years	43	31	29	38
	Percentage	30.5	21.99	20.57	26.95
	20-28 Years of the Age	29	30	24	30
	Percentage	25.66	26.55	21.24	26.55
	29-36 Years of the Age	35	17	32	31
	Percentage	30.43	14.78	27.83	26.96
	37-45 Years of the Age	29	29	37	37
	Percentage	21.97	21.97	28.03	28.03
	46 Years and above	36	23	24	31
	Percentage	31.58	20.18	21.05	27.19
Academic Level	BBA	43	30	37	56
	Percentage	25.9	18.07	22.29	33.73
	MBA	34	40	25	44
	Percentage	23.78	27.97	17.48	30.77
	PGDM	31	30	42	58
	Percentage	19.25	18.63	26.09	36.02
	Ph.D.	37	30	42	36
	Percentage	25.52	20.69	28.97	24.83

Source: The first row has frequencies, and the second row has row percentages

SECTION 4

4.1 Results and Discussions

4.1.1 Knowledge level among students on sustainable development and sustainability

Students of New Delhi have the highest level of knowledge of the concept of the Sustainable Development Goals (SDGs), as evidenced by the fact that the level of awareness regarding the SDGs varies from 81.4% in Noida to 92.9% in New Delhi. The recognition of Agenda 2030 is widespread, notably in New Delhi, where 95.1% of students know its existence. Both New Delhi (95.6% of the students) and Sonipat (91%) have a high level of familiarity with the concept of ecological footprint. Every location has a high level of awareness

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regarding the greenhouse effect, with New Delhi having a rate of 92.9% and Noida having a rate of 88.5%. Sonipat and New Delhi have high recognition rates of 91.7% and 91.2%, respectively, when it comes to the depletion of the ozone layer. This is well acknowledged. There is a comparable level of awareness of the concepts of climate resilience and water conservation, with New Delhi returning to its position as the leader with a score of 90.7%. In New Delhi, there is a high degree of awareness regarding Zero Hour and Inclusive Growth, with 92.3% of people being aware of Zero Hour and 94.0% being aware of Inclusive Growth.

Sonipat has the highest level of awareness of Green GDP, with a rate of 93.8%, and this level of awareness is consistently consistent across all other regions. In New Delhi, Green Accounting and Green Human Resource Management have received a lot of recognition, with the recognition rate for each being 93.4% and 95.6%, respectively. A significant number of people are aware of the Human Development Index (HDI), particularly in New Delhi (92.3% of the students) and Gurugram (88.0% of the students). In particular, the Sustainable Development Goals Index is well known in New Delhi and has a high level of familiarity with the index, which is 95.1%. Sonipat (93.8%) and New Delhi (94.0%) have the highest levels of awareness of Gross National Happiness. Both of these cities have the highest percentages. Many people know the Corruption Index, particularly in Sonipat (90.3% of the students) and New Delhi (92.9% of the students). Within the city of Gurugram, the level of awareness of the Limits to Growth ranges from 85.7% to 91.8%, whereas in New Delhi, it is 95.7%. In New Delhi, the Brundtland Report from 1987 has a recognition rate of 95.1%, indicating that it is widely perceived and acknowledged. The Montreal Protocol, which was formed in 1987, is generally recognized, particularly in Sonipat, where it has a rate of 88.2%, and New Delhi, which has a rate of 91.8%. Since its inception in 1997, the Kyoto Protocol has garnered significant attention from the general public. In terms of awareness, New Delhi has the highest rate, which is 92.3%. Every location has a continuously high degree of awareness of the Paris Agreement on Climate Change (2015), with the highest level recorded in New Delhi, which stands at 92.90 percent. Particularly in Noida, where the notion of the Doughnut Economy has received a recognition rate of 92.3%, and in New Delhi, where it has received a recognition rating of 94.0%, the concept has become popular.

There is a high level of recognition for the United Nations Development Programme (UNDP), with New Delhi having the highest percentage of awareness, which is 94.5%. The United Nations Environment Programme (UNEP) is well-recognized and well-known in all regions, but it is especially well-known in New Delhi, where the awareness rate is 92.3%. Gurugram (90.2% of the students) and New Delhi (93.4% of the students) have the highest perceptions of UNESCO. There is a high level of recognition for the United Nations Framework Convention on Climate Change (UNFCCC), particularly in Sonipat, where the recognition rate is 93.1%, and in New Delhi, where the recognition rate is 92.9%. Sonipat has the highest percentage of people who are aware of the International Labour Organization (ILO), which is 93.8%. This level of awareness is constantly high. More than 94% of people in New Delhi are aware of the Food and Agriculture Organization (FAO), which strongly indicates the organization's widespread popularity. With a remarkable awareness rate of 95.6%, the Global Environment Facility (GEF) is well-known, notably in New Delhi, where it has obtained widespread recognition. According to the Green Climate Fund (GCF), which has a recognition rate of 95.1%, the organization is extremely well-known, particularly in New Delhi.94.4% of Sonipat's population is aware of the International Union for the Conservation of Nature (IUCN), making it the city with the highest level of awareness.

This phenomenon could be attributed to the heightened media attention given to these subjects and the recent global embrace of multilateral accords. These concerns may also be easily explicable in senior secondary school pedagogic programs. This finding aligns with earlier research conducted by Kagawa (2007), indicating that students continue to perceive sustainability primarily as an environmental issue while overlooking its social and economic aspects. According to Zsóka et al. (2013) and other research, sustainability is commonly perceived as a specialized area connected to natural sciences, biology, or geography. This perspective hinders the instruction of sustainability as a subject encompassing multiple disciplines and is relevant to all areas of study. In their study, Zsóka et al. (2013) discovered that university students can acquire knowledge and skills without relying on external guidance or instruction. They strongly prefer education and the media because of their intense interest in the subject. Friends and acquaintances are their least favoured sources. The data we have collected provide evidence for this choice since students identified school learning, online sources, and television as their primary sources of knowledge. The slight increase in awareness of the Human Development Index could be attributed to including secondary school social studies, political history, and geography subjects. This is in opposition to or differs from other economic metrics. Although the Brundtland Report and Montreal Protocol in Noida remain valid, there is less awareness and expectation surrounding more recent publications and sustainable economic models such as the doughnut economy. They have a limited understanding of territorial

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boundaries on a global scale, which is connected to this. The dearth of knowledge can be ascribed to several factors, such as insufficiently comprehensive information from diverse sources and a diminished sense of certain issues as communal concerns. According to the displacement theory (Chaplin & Wyton, 2014), 75% of the students surveyed believed that the responsibility for achieving the SDGs should lie with non-governmental organizations (NGOs) and the UN rather than national governments and multinational corporations, despite recognizing the need to address sustainability issues. Chaplin and Wyton found that students typically hold sustainability in high regard and believe they understand its meaning well. The primary obstacle lies in progressing forward, as a previous investigation conducted by Perrault and Clark (2017) discovered an inflexible method for attaining tangible modifications in behaviour to foster a more sustainable way of living. The primary objective seems to be preserving the existing state of affairs; however, a more proactive strategy is warranted.

Table 2 Knowledge Level of SDGs Concepts among Business Administration students

	Noida	**%**	**Gurugram**	**%**	**Sonipat**	**%**	**New Delhi**	**%**
Concepts								
SDGs	127	81.4	116	87.2	130	90.3	169	92.9
Agenda 2030	134	85.9	119	89.5	126	87.5	173	95.1
Ecological Footprint	127	81.4	113	85.0	131	91.0	174	95.6
Green House effect	138	88.5	117	88.0	132	91.7	169	92.9
Ozen Layer Depletion	127	81.4	120	90.2	132	91.7	166	91.2
Climate Resilience	127	81.4	116	87.2	128	88.9	165	90.7
Water Conservation	132	84.6	117	88.0	129	89.6	165	90.7
Zero Hour	142	91.0	115	86.5	129	89.6	168	92.3
Inclusive Growth	140	89.7	117	88.0	131	91.0	171	94.0
Indicators								
Green GDP	133	85.3	116	87.2	135	93.8	165	90.7
Green Accounting	136	87.2	116	87.2	127	88.2	170	93.4
Green HRM	141	90.4	115	86.5	133	92.4	174	95.6
HDI	124	79.5	117	88.0	129	89.6	168	92.3
SDGs Index	135	86.5	115	86.5	131	91.0	173	95.1
Gross National Happiness	124	79.5	118	88.7	135	93.8	171	94.0
Corruption Index	130	83.3	114	85.7	130	90.3	169	92.9
Model/Initiative								
The Limits to Growth	137	87.8	114	85.7	128	88.9	167	91.8
Brundtland Report (1987)	142	91.0	116	87.2	133	92.4	173	95.1
Montreal Protocol (1987)	129	82.7	117	88.0	127	88.2	167	91.8
Kyoto Protocol (1997)	127	81.4	113	85.0	129	89.6	168	92.3
Paris Agreement on Climate Change (2015)	137	87.8	118	88.7	132	91.7	169	92.9
Doughnut Economy	144	92.3	120	90.2	135	93.8	171	94.0
Internation Authority/Programme								
United Nations Development Programme (UNDP)	125	80.1	119	89.5	130	90.3	172	94.5
United Nations Environment	124	79.5	117	88.0	131	91.0	168	92.3

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Programme (UNEP)								
United Nations Educational, Scientific and Cultural Organization (UNESCO)	128	82.1	120	90.2	128	88.9	170	93.4
United Nations Framework Convention on Climate Change (UNFCCC)	142	91.0	112	84.2	134	93.1	169	92.9
International Labour Organization (ILO)	129	82.7	113	85.0	135	93.8	166	91.2
Food and Agriculture Organization (FAO)	122	78.2	120	90.2	130	90.3	171	94.0
Global Environment Facility (GEF)	124	79.5	112	84.2	131	91.0	174	95.6
Green Climate Fund (GCF)	124	79.5	116	87.2	130	90.3	173	95.1
International Union for Conservation of Nature (IUCN)	135	86.5	116	87.2	136	94.4	167	91.8

Source: Author's Calculations, 2023-24

4.1.2 Awareness and Behavioural Attitude towards Sustainability and SDGs

Although Sonipat has a score of 2.973 for SDG knowledge, Gurugram and New Delhi both have a score of 3.162. When compared to Noida (2.901), Gurugram (3.108) has the best understanding of the 17 Sustainable Development Goals (SDG) objectives and 169 targets. At an average of 3.5 to 3.8, all areas had a significant historical awareness of the implementation of the Sustainable Development Goals in 2015. Averaging between 3.4 and 3.7, the SDG-economic development awareness ratings for the entire region. According to the Sustainable Development Goals (SDGs), all regions have mean scores somewhat higher than 3.5, indicating a high level of knowledge. The Sustainable Development Goal (SDG) indicates that confidence is highest in New Delhi (3.665) and lowest in Sonipat (3.329), leading to the possibility that Sonipat could benefit from training or seminars. The environmental impact knowledge of personal computers, air-conditioned classrooms, and digital boards ranges from 3.4 to 3.7 on average, with New Delhi having the highest level of awareness. Humans and fossil fuels' role in climate change has received mean scores ranging from 3.5 to 3.8, indicating a complete understanding across all continents.

Practicing sustainable values, between 3.5 and 3.8, is the average score for reading about sustainable development and organic products. The percentage of students who recycle and steer clear of businesses that are harmful to the environment is reasonably high, which points to sustainability. The education portion of sustainable living has an average rating of between 3.5 and 3.7. New Delhi has the highest mean score for gender equality in education and work, which is 3.715, indicating that progressive gender attitudes are prevalent in the city. Perceptions of the intake of water Given that the average score is between 3.4 and 3.7, the high trust that unlimited water usage is okay if it is accessible indicates that there is a need for further learning about sustainable water practices. In Noida and Sonipat, tailored awareness initiatives can enhance SDG knowledge, especially concerning the number of goals and targets. It is possible to increase SDG explanation and advocacy confidence through the use of workshops and training anywhere, particularly in Sonipat. Education on the environmental impacts of technology and activities that are used daily can contribute to the promotion of sustainability. Promoting healthy behaviours can be accomplished by reading about sustainable development and buying organic products. To accomplish the goals of sustainable development, it is necessary to engage in campaigns for gender equality and water conservation.

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Table 3 Awareness and Attitude scores towards sustainable development and sustainability

	Noida		Gurugram		Sonipat		New Delhi	
Variable	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Knowledge								
Do You Know the full form of SDGs?	3.064	1.464	3.162	1.397	2.973	1.517	3.162	1.432
Do You Know the SDGs has 17 goals and 169 targets?	2.901	1.388	3.108	1.416	3.041	1.404	2.904	1.518
Do You Know the SDGs were implemented in 2015?	3.686	1.318	3.762	1.351	3.466	1.303	3.653	1.344
Do You Know the SDGs were related to economic development	3.657	1.304	3.677	1.382	3.39	1.406	3.647	1.331
Do You Know the SDGs were related to environmental concern	3.686	1.349	3.562	1.387	3.5	1.361	3.605	1.431
How confident are you in explaining the SDGs to someone else?	3.605	1.37	3.477	1.521	3.329	1.37	3.665	1.347
Awareness								
Your PC is the cause of emitting greenhouse gas	3.651	1.336	3.585	1.357	3.432	1.384	3.701	1.36
Airconditioned classrooms cause an increase in climate vulnerability	3.756	1.288	3.677	1.337	3.562	1.329	3.545	1.4
Your digital board is caused by greenhouse gas	3.669	1.394	3.7	1.456	3.507	1.277	3.677	1.277
Intensive Electricity use causes environmental degradation.	3.721	1.326	3.623	1.427	3.445	1.276	3.623	1.343
Some elements of climate change are carried by people's actions.	3.529	1.391	3.685	1.324	3.425	1.291	3.551	1.396
Each instance of utilizing coal, oil, or gas contributes to the phenomenon of climate change.	3.651	1.309	3.808	1.27	3.514	1.396	3.497	1.392
Carbon dioxide is believed to be the main gas responsible for the greenhouse effect.	3.622	1.339	3.477	1.448	3.466	1.319	3.772	1.274
The effect of greenhouse gases is caused by the existence of a hole in the ozone layer in the planet's atmosphere.	3.686	1.277	3.692	1.413	3.486	1.298	3.593	1.327
I have read a book that discusses sustainable development.	3.628	1.342	3.554	1.398	3.534	1.355	3.635	1.368
Behavioural Attitudes								
Green product Purchase	3.721	1.295	3.8	1.278	3.459	1.385	3.563	1.342
Organic Product Purchase	3.738	1.314	3.685	1.392	3.459	1.298	3.647	1.402
Education that provides individuals with the skills required for sustainable community living	3.634	1.385	3.7	1.45	3.541	1.345	3.497	1.384
When making purchases, avoid businesses that don't care about the environment.	3.767	1.211	3.508	1.49	3.514	1.34	3.479	1.439
I make an effort to recycle things at home.	3.599	1.367	3.685	1.442	3.445	1.324	3.683	1.384
Males and females should have equal access to education and work.	3.715	1.34	3.638	1.353	3.438	1.323	3.515	1.375
We can use as much water as we want if it's available.	3.733	1.328	3.585	1.451	3.432	1.333	3.671	1.377

Source: Author's Calculations, 2023-24

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4.1.3 Awareness and Behavioural Attitude among male and female students

In terms of their comprehension of the all-encompassing relevance of the SDGs, there is no apparent distinction between male and female students. No discernible difference between the understanding of the number of goals and targets that male and female students have. Male students demonstrated a much higher competence than female students in the year the SDGs were implemented. A much better level of comprehension is demonstrated by male students compared to female students regarding the connection between the SDGs and the progress of the economy. When it comes to understanding the connection between the SDGs and environmental concerns, males demonstrate a substantially better comprehension level than women. Male students exhibit a substantially higher level of self-assurance when discussing the SDGs with others than women. The amount of competence that males possess concerning the greenhouse gas emissions related to personal computers is much higher than that of female students." The amount of expertise that males possess in relation to the impact that air-conditioned classrooms have on climate vulnerability is much higher than that of female students. The amount of skill male students display in relation to the greenhouse gas emissions associated with digital boards is significantly higher than that of female students. Compared to female students, male students have a substantially higher level of consciousness when it comes to identifying the environmental destruction produced by excessive power usage.

For example, when it comes to identifying human actions' impact on climate change, males exhibit a substantially higher degree of consciousness than females. The level of understanding that males and females have regarding the influence that the consumption of coal, oil, or gas has on climate change is not significantly different from one another. There is a consensus among scientists that carbon dioxide is the primary gas responsible for the greenhouse effect. When compared to female students, male students demonstrate a substantially greater level of comprehension when it comes to recognizing carbon dioxide as the primary gas responsible for the greenhouse effect. The level of comprehension that male and female students has on the relationship between greenhouse gases and the depletion of the ozone layer is not significantly different from one another concerning this matter. Regarding sustainable development, men have a substantially better degree of expertise than women, as evidenced by the fact that they are actively involved with relevant literature.

How an individual acts or behaves is part of what is referred to as their behavioural attitude. A product is considered to be "green" if it is either environmentally friendly or can be maintained without inflicting irreparable damage to the natural environment. When compared to females, guys demonstrate a substantially higher propensity to be interested in environmentally friendly products. Compared to females, male students prefer organic items that are much higher than that of females. Individuals who receive education that equips them with the necessary skills for the long-term sustainability of their community. There is no discernible difference between the perspectives of males and females about education to achieve sustainable community living circumstances. Regarding avoiding companies that demonstrate a lack of concern for the environment, there is no discernible difference between males and females regarding their attitudes. It has been observed that male individuals have much more positive attitudes than female individuals do about recycling within their own homes. Regarding the educational and occupational opportunities available to students of all genders, there should be no discrimination against either type of person. When it comes to educational and occupational prospects, males have far more positive opinions toward gender equality than women do. This is especially true in terms of educational opportunities. There is a significant possibility that this entry is missing some information. When the survey circumstances are considered, the considerable p-value suggests a clear difference in responses, which implies that males are more likely to adopt a lenient posture about water use.

Figure 4 Awareness and Behavioural Attitude among male and female students in NCR

A significant difference between Male and Female students	Gender	N	Mean	Std. Deviation	Significant
Knowledge					
Do You Know the full form of SDGs?	Male	381	3.05	1.472	0.422
	Female	234	3.15	1.423	
Do You Know the SDGs has 17 goals and 169 targets?	Male	381	3.00	1.468	0.683
	Female	234	2.95	1.376	
Do You Know the SDGs were implemented in 2015?	Male	381	3.78	1.350	0.001
	Female	234	3.41	1.265	
Do You Know the SDGs were related to economic development	Male	381	3.76	1.365	0.000
	Female	234	3.33	1.297	
Do You Know the SDGs were related to	Male	381	3.74	1.371	0.001

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environmental concern	Female	234	3.36	1.368	
How confident are you in explaining the SDGs to someone else?	Male	381	3.65	1.428	0.007
	Female	234	3.33	1.333	
Awareness					
Your PC is the cause of emitting greenhouse gas	Male	381	3.70	1.397	0.014
	Female	234	3.43	1.279	
Airconditioned classrooms cause an increase in climate vulnerability	Male	381	3.81	1.337	0.000
	Female	234	3.36	1.297	
Your digital board is caused by greenhouse gas	Male	381	3.77	1.398	0.003
	Female	234	3.43	1.239	
Intensive Electricity use causes environmental degradation.	Male	381	3.73	1.381	0.003
	Female	234	3.40	1.250	
Some elements of climate change are carried by people's actions.	Male	381	3.66	1.406	0.007
	Female	234	3.35	1.246	
Each instance of utilizing coal, oil, or gas contributes to the phenomenon of climate change.	Male	381	3.68	1.399	0.113
	Female	234	3.50	1.254	
Carbon dioxide is believed to be the main gas responsible for the greenhouse effect.	Male	381	3.73	1.366	0.001
	Female	234	3.37	1.278	
The effect of greenhouse gases is caused by the existence of a hole in the ozone layer in the planet's atmosphere.	Male	381	3.69	1.411	0.061
	Female	234	3.49	1.162	
I have read a book that discusses sustainable development.	Male	381	3.71	1.402	0.007
	Female	234	3.40	1.274	
Behavioural Attitude					
Green product Purchase	Male	381	3.77	1.339	0.001
	Female	234	3.41	1.285	
Organic Product Purchase	Male	381	3.75	1.400	0.010
	Female	234	3.46	1.253	
Education that provides individuals with the skills required for sustainable community living	Male	381	3.67	1.455	0.075
	Female	234	3.46	1.264	
When making purchases, avoid businesses that don't care about the environment.	Male	381	3.65	1.421	0.086
	Female	234	3.45	1.274	
I make an effort to recycle things at home.	Male	381	3.72	1.402	0.008
	Female	234	3.41	1.318	
Males and females should have equal access to education and work.	Male	381	3.72	1.377	0.001
	Female	234	3.34	1.271	
We can use as much water as we want if it's available.	Male	381	3.77	1.348	0.000
	Female	234	3.36	1.374	

Source: Author's Calculations, 2023-24, Sig. ($p < 0.05$)

4.1.4 Awareness and Behavioural Attitudes of different age groups of students

When it comes to specific aspects of the SDGs, such as the year in which they will be implemented, their connection to economic development and environmental issues, and the level of confidence in explaining the SDGs, there are significant disparities in students' awareness and knowledge. A substantial degree of variation exists among individuals regarding their level of awareness regarding various environmental factors. These aspects include the function that technology plays (digital boards, personal computers), the amount of electricity that is consumed, and the activities that individuals engage in that contribute to climate change.

The awareness of the hole in the ozone layer and the effect of greenhouse gases are two examples of areas with significant knowledge gaps. There is a clear disparity in the behavioural perspectives that people hold about the following topics: support for environmentally friendly and organic items, attempts to recycle, gender equality, and water use. By drawing attention to these differences, we can discern that individuals of varying ages have varying degrees of participation and activity concerning sustainability.

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According to the findings of this research, there appears to be a significant disparity between the degrees of knowledge, awareness, and attitudes that individuals of varying ages possess concerning issues of eco-friendly practices and environmental preservation. When successfully adapting educational and awareness initiatives to address the various requirements and gaps connected with different age groups, having such insights can be incredibly essential on some levels.

Figure 5 Awareness and Behavioural Attitudes of different age groups of students in NCR

A significant difference between Age Groups		Sum of Squares	df	Mean Square	F	Sig.
Knowledge						
Do You Know the full form of SDGs?	Between Groups	13.709	4	3.427	1.630	.165
	Within Groups	1282.372	610	2.102		
	Total	1296.081	614			
Do You Know the SDGs has 17 goals and 169 targets?	Between Groups	10.281	4	2.570	1.254	.287
	Within Groups	1250.444	610	2.050		
	Total	1260.725	614			
Do You Know the SDGs were implemented in 2015?	Between Groups	278.242	4	69.561	52.558	.000
	Within Groups	807.342	610	1.324		
	Total	1085.584	614			
Do You Know the SDGs were related to economic development?	Between Groups	275.165	4	68.791	49.309	.000
	Within Groups	851.020	610	1.395		
	Total	1126.185	614			
Do You Know the SDGs were related to environmental concerns?	Between Groups	231.195	4	57.799	37.540	.000
	Within Groups	939.179	610	1.540		
	Total	1170.374	614			
How confident are you in explaining the SDGs to someone else?	Between Groups	307.124	4	76.781	52.265	.000
	Within Groups	896.128	610	1.469		
	Total	1203.252	614			
Awareness						
Your PC is the cause of greenhouse gases being released.	Between Groups	211.011	4	52.753	34.872	.000
	Within Groups	922.787	610	1.513		
	Total	1133.798	614			
Airconditioned classrooms cause an increase in climate vulnerability.	Between Groups	272.578	4	68.145	50.213	.000
	Within Groups	827.835	610	1.357		
	Total	1100.413	614			
Your digital board is caused by greenhouse gas	Between Groups	281.433	4	70.358	51.435	.000
	Within Groups	834.430	610	1.368		
	Total	1115.863	614			

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Intensive Electricity use causes environmental degradation.	Between Groups	272.716	4	68.179	49.996	.000
	Within Groups	831.844	610	1.364		
	Total	1104.559	614			
Some elements of climate change are carried by people's actions.	Between Groups	328.826	4	82.206	62.857	.000
	Within Groups	797.783	610	1.308		
	Total	1126.608	614			
Each instance of utilizing coal, oil, or gas contributes to the phenomenon of climate change.	Between Groups	240.789	4	60.197	42.036	.000
	Within Groups	873.553	610	1.432		
	Total	1114.341	614			
Carbon dioxide is believed to be the main gas responsible for the greenhouse effect.	Between Groups	252.327	4	63.082	44.960	.000
	Within Groups	855.859	610	1.403		
	Total	1108.185	614			
The effect of greenhouse gases is caused by the existence of a hole in the ozone layer in the planet's atmosphere.	Between Groups	250.593	4	62.648	46.205	.000
	Within Groups	827.076	610	1.356		
	Total	1077.668	614			
I have read a book that discusses sustainable development.	Between Groups	300.718	4	75.179	54.735	.000
	Within Groups	837.842	610	1.374		
	Total	1138.559	614			
Behavioural Attitudes						
Green product Purchase	Between Groups	256.008	4	64.002	47.098	.000
	Within Groups	828.942	610	1.359		
	Total	1084.950	614			
Organic Product Purchase	Between Groups	256.352	4	64.088	45.140	.000
	Within Groups	866.061	610	1.420		
	Total	1122.413	614			
Education that provides individuals with the skills required for sustainable community living	Between Groups	307.015	4	76.754	53.453	.000
	Within Groups	875.906	610	1.436		
	Total	1182.920	614			
When making purchases, avoid businesses that don't care about the environment.	Between Groups	278.569	4	69.642	48.728	.000
	Within Groups	871.815	610	1.429		
	Total	1150.384	614			
I make an effort to recycle things at home.	Between Groups	235.172	4	58.793	38.562	.000
	Within Groups	930.021	610	1.525		

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	Total	1165.193	614			
Males and females should have equal access to education and work.	Between Groups	251.568	4	62.892	44.282	.000
	Within Groups	866.357	610	1.420		
	Total	1117.925	614			
We can use as much water as we want if it's available.	Between Groups	262.036	4	65.509	44.806	.000
	Within Groups	891.860	610	1.462		
	Total	1153.896	614			

Source: Author's Calculations, 2023-24, Sig. ($p < 0.05$)

SECTION 5

5.1 Conclusion and Policy Recommendations

All of the regions in NCR that were investigated have a remarkable level of awareness regarding the concepts, indicators, models/initiatives, and international authorities/programmes associated with the Sustainable Development Goals (SDGs). Regarding awareness, New Delhi consistently displays the greatest levels among students. The students, particularly in New Delhi, thoroughly grasp and acknowledge the actions and issues associated with sustainability. Using this understanding to improve the implementation and promotion of policies and practices concerned with sustainability is possible. Understanding fundamental knowledge about SDGs and sustainability appears to be most effectively achieved by self-study or pursuing higher education. This study presents a framework for academic institutions to effectively intervene and improve the quality of education for future professionals in relation to the Sustainable Development Goals (SDGs), the 2030 Agenda, and sustainable development. These topics are currently gaining popularity and receiving increased media attention. This objective could be achieved by integrating deliberate educational initiatives into the existing academic curriculum, possibly by implementing a nationally synchronized strategy.

Planned initiatives aimed at promoting sustainable living among university students may target several levels of implementation. These interventions can enhance awareness, knowledge, and involvement and ultimately foster sustainable habits. This considers both sustainable education and Education for Sustainable Development (ESD). Developing the sustainability capabilities of the teaching staff can be accomplished by several multidisciplinary methods, such as academic courses, exams, workshops, seminars, and conferences. By optimizing existing resources and implementing "nudging" strategies, the latter can serve as a model for students to adopt sustainable practices and promote sustainable behaviours and activities across all disciplines within the academic setting. This may entail promoting gender parity, implementing recycling practices, adopting sustainable food and transportation alternatives, optimizing energy and infrastructure utilization, addressing the gender wage disparity, advocating for women's and minority rights and empowerment, prohibiting all forms of discrimination, and acknowledging education as a fundamental human entitlement across all educational tiers.

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