



**A STATICAL SURVEY OF ENVIRONMENTAL AWARENESS, ATTITUDE,  
AND INVOLVEMENT WITH STUDENTS OF HIGHER EDUCATION  
INSTITUTIONS: AN EMPIRICAL STUDY IN WEST UTTAR PRADESH**

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**ABSTRACT**

Environmental awareness is to understand the fragility of our environment and the importance of its protection. Promoting environmental awareness is an easy way to become an environmental steward and participate in creating a brighter future for Students. Environmental awareness not only make us knowledgeable about the environment, but it also helps in acquainted with sets of values, skills and attitudes for addressing environment related issues. Students, especially of higher institutions/universities are the hope for future betterment of environment, and for attaining environmental sustainability. The study surveyed environmental awareness level, attitudes, and participation among Choudhary Charan Singh University students, (CCSU, Meerut). It examined the level of knowledge of students about awareness on environment and it also find their attitudes towards the environment knowledge as well as their participation level in environmental improvements and protection. This paper was based on primary data and hence technique of method of data collection was employed by using questionnaire. A total number of 200 questionnaires were directed, students` replies were recorded, and the data was investigated using Statistical Method for Social Sciences (SMSS) software. The sampling method used was laminated random sampling in which students were tested at random around the university so as to confirm an impartial illustration of the total population under learning. Results from the study discovered high level of environmental information and positive attitudes towards the environment among the students, but low-level participation in environmental care activities. This implies that, other factors than environmental knowledge and awareness may be the speeds to make students` active contribution in environmental protection and development activities.

**KEYWORDS:** Environmental awareness, Knowledge, Attitude, Involvement, Environmental Protection,

**INTRODUCTION**

Worldwide environment has in the past few years been detected to have suffered serious deviations which were largely seen as the result of human actions. The excellence of environment is supposed to have been meaningfully altered to an shocking rate through declined in quality of air, water, soil,

improved sea pollution, nature extinction, damage of biodiversity, and improved in frequency and strength of catastrophic natural tragedies resulting in loss of lives and properties, spread and increased in cancerous diseases and the like (Abbas,2013). Hence, it is no longer subject to debate whether the above-

mentioned environmental problems are natural or anthropogenic. It has been ascertained that man as the senior citizen of the planet Earth has been totally responsible through his greediness actions of destruction and over exploitation of the environment and natural resources. Hence, the need for environmental education and awareness becomes paramount as an essential measure to curtail the situation to a greater extent. In the works of Ibrahim et al (2012) put forward that Environmental education is a way of creating knowledge, comprehension, values, attitudes, skills, abilities and awareness among individuals and social groups towards the environment protection. The Geographical Association's Environmental Education Working Group (1980) defines Environmental Education (EE) as a multitude of processes and activities by which an understanding of environment is developed and through which caring and committed responses are evolved. It is concern with knowledge, emotions, feelings, attitudes, and values. Its aim is to produce informed and responsible citizens capable of playing an active role in all matters concerned with the environment in which we all inhabit (Maigari, 2002). People requirement to be made alert of the importance of our environment in which we aware and the need to reservation and protect it, as well as the significances of our actions in the course of growing activities. Thus, the definitive aim of environmental edification is to forward and shape human performance towards accountable acts and assurances to environment. As such therefore, operative environmental education gears and encourages responsible citizenship performance toward the environment and environmental safety. Thus, environmental education and awareness as well as induced public participation in environmental protection become

paramount to attaining environmental sustainability. Therefore, this paper attempted a micro study on environmental awareness, attitude and participation amongst students of Choudhary Charan Singh University Meerut. The university is diverse with a large number of students not only from different states of India but also across the world, which provide the good avenue to study and investigate the students' environmental awareness and involvement.

### **1. Material and Method**

The paper examined student's environmental awareness, involvement and attitude amongst Choudhary Charan Singh University Meerut. It attempted to investigate students' level of awareness and participation in environmental protection. The study employed descriptive statistics in the presentation and interpretation of data using Statistical Method for Social Sciences (SMSS) software.

### **2. The Study Area**

The study area (CCSU) is located at latitude 77.7405 East and longitude 28.9692 North occupying a total geographical area of about 0.898 square kilometers (about 222 acres/89.84 hectares) at an elevation of 715 feet above mean sea level (Wikipedia). CCSU is situated in the north part of India, in the state of Uttar Pradesh, Meerut District.

### **3. Objectives of the Study**

The study has been undertaken to:

- 1) Find out the level of environmental awareness among students of the university under study.
- 2) Examine students' attitudes and intelligence of accountability towards the environment and environmental

- problems.
- 3) Investigate students` involvement and level of engagement in environmental activities and protection.
  - 4) Prosper references on the bases of the results gained from the study.

#### 4. Methods of Data Collection

##### a. Primary Data

The study employed questionnaire survey method, a structured form of questionnaire to obtain information and responses of the sampled Population to examine their environmental awareness level, attitudes, concern, and roles towards the environment and environmental protection. A total of 200 questionnaires were administered out of which 175 questionnaires were retrieved. Students were sampled at random from wherever they could be found in their respective schools within the university from which responses were collected. The questionnaire contains four sections; the bio-data part, environmental knowledge/awareness, attitudes towards the environment, and participation level.

##### b. Secondary Data

The study also studied a number of relevant literatures and earlier research works, sourced from printed and unpublished sources, journals, books, and so on, to enrich the preliminary and the literature review aspects of the research work.

##### c. Analytical Techniques

The analysis of data obtained from the study was attained through simple expressive statistical techniques. Frequency counts and tables, percentages, cross tabularization were determined. Results were presented in graphical forms using pie and gathered bar charts to ensure adequate illustrations and were reinforced with clarification and discussions.

management were prepared, analyzed methods and procedures bordered above. Results were debated and references were drawn. However, the study is wonderful primary data, except in the preliminary and literature review characteristic of the research work. However, a total of 200 questionnaires were administered out of which 175 were successfully retrieved. Responses from the respondents were recorded pertaining to bio-data (age group, gender, academic discipline, year of study, etc), environmental awareness test, attitudes and level of commitment to environmental protection. These responses were later scored, and from which the level of awareness and participation were determined. The values obtained were later inputted in SPSS statistical software and the appropriate statistical analysis was later conducted. The results obtained are discussed and intensely explained as can be seen in the preceding paragraphs/pages.

In the table below (table 1), the age structure of the respondents is shown. The age groups were drawn into 4-year class intervals of 16-20, 21-25, 26-30 and 30-above in order to ensure adequate representation. The age group of the respondents within the interval of 16-20 recorded 61 students making 30.5 valid percent of the total respondents. The highest count of the respondents age groups falls in the category of 21-25, recording a number of 112 students with the valid percent of 64.0%. This implies that the age structure of the respondents is concentrated at this age group revealing youthful age of the students with a total cumulative percent at 92.5% collectively.

#### 5. Results and Discussion

In this section, data composed from the survey through questionnaire

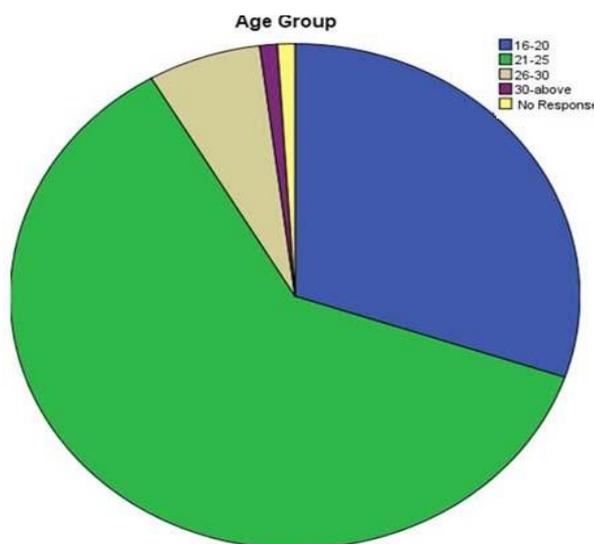
**Table 1: Age Groups of the Respondents**

	Age Group	Frequency	Percent	Valid Percent	Cumulative Percent
	16-20	56	32	33.5	33.5
	21-25	112	64	65.5	93.5
	26-30	12	6.85	7	98.5
	31-above	2	1.14	1	100
	Total	173	98.85	100	
Missing	System	2	1.14		
Total		175	100		

The age group within 26-30 recorded 12 respondents only with the valid percent of 6.85%. This shows low number of students falling into that age group. The least count fall between 30-above age groups with Only 2 respondents amounting to 1.14 %. Two of the total respondents did not respond to the question and hence their age group could not be determined.

In general, the study revealed that, the larger proportion of the students investigated from the study fall between 17 to 26 years making 93.5% total of the population under study. This signifies the nature of youthful age structure of the students upon which the faith of attaining environmental

sustainability and developments depend upon. The table 1 is depicted pictorially using a pie chart as shown below.



**Figure 1: Age Groups of the Respondents.**

Source: Generated from table 1

Haven seen the age structure of the group respondents above, their level of environmental awareness was also obtained. This is shown in table 2 below.

**Table 2:** Respondents` Environmental Knowledge Level

Rank	Frequency	Percent	Valid Percent	Cumulative Percent
Low	3	1.71	1.9	2
Medium	62	35.44	35.4	36.1
High	110	62.85	62.9	100
Total	175	100	100	

From the table above, the level of environmental knowledge of the respondents were ranked from **Low, Medium to High**. However, out of the total 175 students investigated, only 3 students fall under the low category of Low awareness with the valid percent of 1.71%. A number of 62 students fall under the medium category of awareness level amounting to 35.44%. The students with higher level of environmental awareness made the largest count of 110 out of the 175 total respondents with valid percent of 62.85%. Thus, data from the study generally revealed high level of environmental awareness among the university students with 62.9% total. When compared with the cumulative percent of those students within both Low and Medium level of environmental awareness of 36.1%, it can be concluded that, the study revealed high environmental awareness among the university students.

The study also attempted to find out the level of student’s participation and involvement towards environmental protection and conservation. This involvement in environmental protection could be either direct or indirect. Direct participation involves students engaging themselves in environmental students` clubs and or organizations carrying out environmental activities. The indirect involvement in environmental protection were regarded as individuals being committed to environmental protection and conservation through activities of tree planting, sanitation, proper disposal of waste items and re-use etc. However, the study clubbed all together the direct and indirect participation to environmental protection to determine the involvement level in general. Table 3 below, shows the level of student’s involvement in environmental protection.

**Table 3:** Students` Participation Level in Environmental Protection

<i>Participation Level</i>					
	Rank	Frequency	Percent	Valid Percent	Cumulative Percent
	Low	62	35.42	36.3	36
	Medium	67	38.28	38.3	74.5
	High	44	25.14	25.2	100
	Total	173	98.5	100	
Missing	System	2	1.14		
Total		175	100		

As shown in the table above (table 3), the level of students` involvement in environmental protection was ranked from **Low, Medium to High**. Generally, it exhibits low participation in environmental activities and protection. A number of 62 students out of

the total 175 respondents amounting to 35.42% fall under *low* participation. Similarly, 67 respondents with 38.28 valid percent were ranked among the *medium* category. Thus, combining all together (Low and Medium categories) has a cumulative percentage 74.5%. The respondents with *high* level of participation in environmental activities and protection are 44 with only 25.14%. This indicates a smaller number of people participating fully in environmental activities and protection counteracting the high-level environmental knowledge exhibited by the study as shown in the previous page (Table 2). However, out of the total respondents (175), two students did not respond, so their input pertaining to participation could not be determined.

Thus, from the data, the study revealed that, environmental knowledge alone may not be the only stimulating factor to instigate active participation in environmental protection and activities. There may be numerous other factors. To arrive at a Foolproof explanation, the data contained in table 2 and 3 were cross-tabulated to find out the level of association between the variables; the environmental knowledge and students` participation in environmental activities and protection.

**Table 4:** Cross-tabulations; Environmental Knowledge and Involvement Levels

<i>Cross-tabulation; Knowledge level and involvement</i>					
	<i>Count</i>	<i>Involvement Level</i>			<i>Total</i>
		<i>Low</i>	<i>Medium</i>	<i>High</i>	
Knowledge Level	Low	2	0	1	3
	Medium	26	21	10	57
	High	34	46	33	113
Total		62	67	44	173

From the table above (table 4), cross-tabulation between students` environmental knowledge and involvement level reveals that, respondents with low level awareness and low-level involvement are 2. Similarly, those with low level awareness and participate moderately in environmental activities are 0. And those with low level environmental awareness and fully participate in environmental protection activities is only 1. This numerically reveals that, at low level of environmental knowledge there are very few people participating in environmental protection and conservation activities. The number increases with the increase in environmental knowledge at medium level and low-level involvement

recording 26 persons, 21 and 10 persons in medium and high-level participations respectively. So also, at high level awareness, 34 persons were recorded low involvement, 46 persons at medium level involvement and 33 persons at high level involvements.

Thus, collectively, there are 113 respondents ranking *high* environmental knowledge level at all the three levels of involvement, and this indicates a high proportion of people being aware. On the contrary, there is least number of respondents 44 at high level of involvement and awareness than at the totals of low and medium contribution levels. This of course indicates low level of respondents` involvement in

environmental activities since it recorded the least score.

The study also attempted to find out the attitudes and students` sense of responsibility towards the environment. Since attitudes are sets of values and feelings of concern towards environment and environmental development and protection, they may affect ones feeling

of responsibility towards the environment. Therefore, positive attitudes shape citizens behaviors and perceptions towards the responsible actions to environment (Hungerford et al, 2010). Figure 3 below, shows respondents attitudes pertaining to different magnitude of concerns on environmental issues and problems.

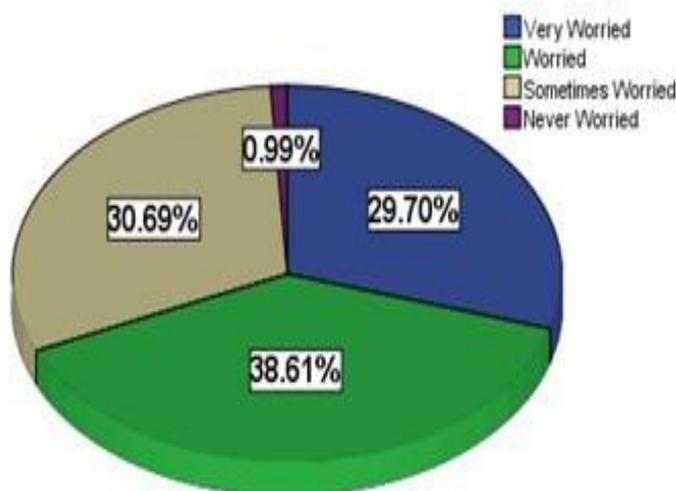


Figure 2: Respondents` Attitudes towards Environmental Issues

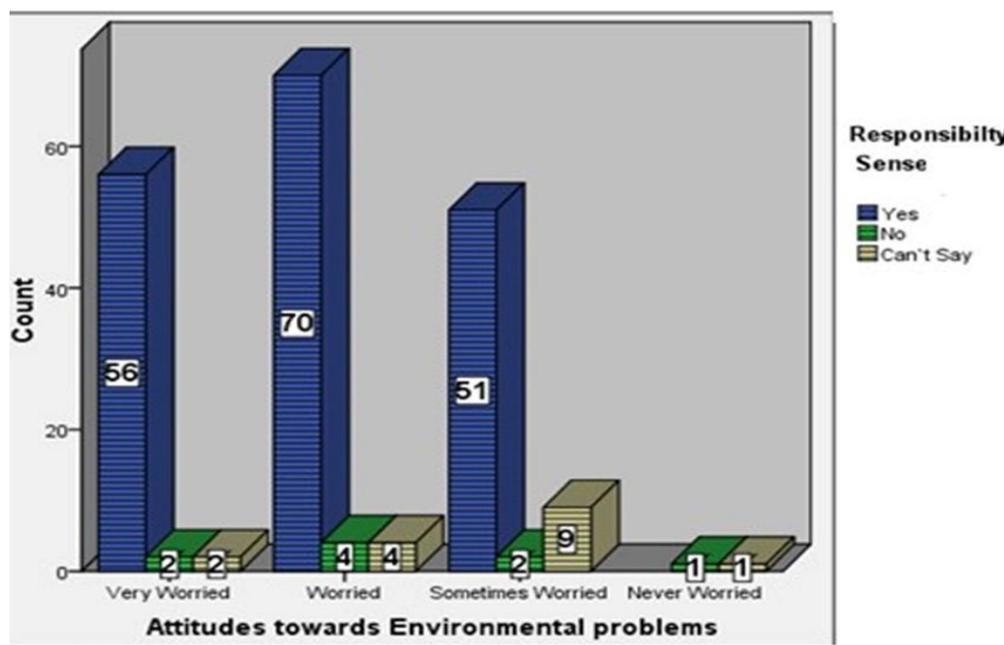
From the chart above (figure 2), which reveals students` attitudes and concern on environmental issues and problems. Their levels of concern were denoted by different degree of strength in attitude from; *very worried, worried, sometimes worried, to never worried*. As shown in the figure, the proportions of respondents who *worried* about the present status of environmental problems around them carry 38.61% which is the largest proportion of the total sampled population. This expresses some degree of concern from the students, that they are not only aware of the environmental problems around them, but also have certain feelings towards these environmental issues as a matter of risk. The respondents who are only *sometimes worried* on these issues carry 30.69%. While of those who are of deep concern and are very worried on these problems carry 29.70%. The margin

between the two (sometimes worried and very worried) is rather insignificant by 0.99%. Nevertheless, this shows students` in-depth feelings on environment and environmental problems which they see every day around them. The least of all the respondents` attitudes on these issues fall in the category of those students who are never worried with only 0.99%. This proportion is very insignificant. Thus, in general, the study revealed that, students have acquired a set of positive attitudes on environment and environmental problems since the larger proportion of their concerns are with the categories of *worried, very worried, and sometimes worried*, with very least from *never worried*.

However, in order to take an in-depth look into the respondents` attitudes and concerns towards the environment, the

study attempted to correlate students` concerns and that of their sense of responsibility to environmental

protection and improvements. This is expressed in a clustered bar chart as shown in figure 3 blow.



**Figure 3:** Cross tabulation: Students Attitudes and Sense of Responsibility towards Environmental Issues

From the figure above, students` levels of concern and sense of responsibility to the environment were cross tabulated and were shown at various degree of strength from; very worried, worried, sometimes worried and never worried, with Yes, No, and Can`t say respectively.

Students with *very worried* concern level have high sense of responsibility (*Yes*) at 51, *No* at 2, and *can't say* at 2. This implies that, students with very worried concerns have higher feelings of responsibility to environmental protection than those with *No*, *Can't Say* both at 2 each. Similarly, students with *worried* concern on environmental problems recorded highest sense of responsibility (*Yes* category) at 62 which is much more than the *very worried* category. *No* and *can't say* recorded 3 each. This signifies that, students at this level have much more feelings and

concern to the environment proportionately, while those who have none and or not sure maintain the same proportion.

The respondents at *sometimes worried* level of concerns recorded sense of responsibility 46 (*Yes*), 2 (*No*), and 2 (*Can't say*). At this level the sense of responsibility variable at *Yes* decreases (as compared with the other levels of very worried and worried) while others (*No* and *Can't Say*) varied simultaneously. This implies low responsibility feelings towards the environment which coincided significantly with attitude of the respondents.

However, in the *Never worried* level of concern, sense of responsibility (at *Yes* category) to the environment is rather zero as can be seen in the figure. In the same vein, at *No* and *Can't say* level of responsibility sense scored the least

proportions at 1 each. This describes practically that students with least attitude towards the environment have least feeling of responsibility to environmental protection and improvement.

Thus, generally, the study revealed that the larger proportion of students have positive attitudes towards environment and hence high sense of responsibility to environmental protection. This coincided with high level of environmental knowledge as discussed above.

## **6. Recommendations**

The importance of the environment in which we all aware and bring out our day-to-day life routines cannot be overstressed. The quality of our lives and wellbeing is directly or indirectly dependent on the quality of such environment. The mutuality between man and environment is so exposed beyond any doubtful mind. Over the recent decades, environmental degradation became evident, natural catastrophic events became prevalent, which was seen largely as the result of man's greediness action aggravating the situation. Hence, this drawn the attention of global community towards a better and quality environment through sustainable development. In an attempt to attaining this goal, environmental education and awareness became important mechanisms to inducing community participation in environmental protection and improvement.

The study examined students' environmental awareness, attitudes and participation level in environmental protection and improvement. Environmental sustainability is rather a new concept and the attainment of it is associated with long term series of

strategic plans and activities. Students, especially of tertiary institutions are the hope for future development policies and hence environmentally viable policies and technologies necessary to attaining environmental sustainability.

Thus, result from the study revealed that students have high environmental awareness, and positive attitudes towards environment, but low-level participation in environmental protection activities and improvement. This implies that, students being aware of environment, and environment related problems alone, does not make them participate actively in the protection and improvement of environment. Hence, this means that, there could be factors other than being knowledgeable about the environment that may stimulate students' participation level. This also calls for in-depth research in this arena to explore more of what other factors are essential to inducing students' participation in particular and the larger community participation in general. Altogether, this will ensure the successful attainment of Environmental Education (EE) objectives, and hence environmental sustainability at long run.

University on the other hand should provide the necessary platforms to encourage students' participation in environmental activities through students' environmental associations and clubs, debates and seminars. This will stimulate students' interest in environment and make them assume certain level of responsibility towards environmental protection and improvement.

## **7. Summary and Conclusion**

The study plotted and examined university students' environmental awareness level, attitudes towards the atmosphere, as well as their level of contribution in environmental activities. Results from the study revealed that a significantly higher proportion of students displayed high awareness level by 63.9% of the total sampled population. In the contrary, the study also revealed that, in spite of high level of knowledge and awareness on environment but also low-level involvement in environmental activities by about 74%. In other words, results from the study imply that, students being aware about their surrounds and having knowledge about their environment may not be the only factor to stimulate participation in environmental improvement and protection activities. So also, the study emphasized that high environmental awareness has direct relation with acquiring good attitudes and higher sense of responsibility towards environment.

Thus, this study has identified an important gap for further studies in order to find out more of what other factors if any could induce students actively participating in environmental protection and improvement activities. This may apply to the larger community as well since students form an educated part of community, and hence the future leaders and policy makers. Therefore, there is the need for an in-depth study in order to find out a foolproof result and become certain about what other issue stimulate active involvement. This will ensure the success of environmental education program and help in attaining environmental sustainability at the grassroots.

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