

A COMPARATIVE STUDY OF ENVIRONMENTAL AWARENESS AMONG UNDER GRADUATE STUDENTS OF ARTS AND SCIENCE FACULTIES OF A.M.U.

Sayedil Islam*

Rahed Razzak Sk**

Abstract:

The major thrust of this study is to explore the environmental awareness among under-graduate students of arts and science faculties of AMU. The investigator conducted this study with 200 sample selected randomly from different departments of Arts and Science faculties of Aligarh Muslim University. The investigator used Environmental Awareness Ability Measure (EAAM) conducted by Dr. Praveen Kumar Jha for the purpose of data collection and statistical techniques Mean, SD and t-test were utilized for data analysis and interpretation. The study explores the attitude of undergraduate students towards environmental awareness as per their faculties. Another point of analysis result is the difference of awareness among the female and male students. The study tries to show that gender difference is important in developing environmental awareness.

Keywords: Environment, Awareness, Under-graduate Students, Science Faculty and Arts Faculty.

* **Master of Education (M.Ed.), Department of Education, Aligarh Muslim University, Aligarh, U.P., India**

** **Research Scholar, Department of Education, Aligarh Muslim University, Aligarh, U.P., India**

1. Introduction:

There is an increasing realization that the human race now stands at the crossroads in choosing the options it has in the areas of environment and development. The progressive and technically advanced countries have given to the biosphere; pollution and eco-degradation, as a result of affluence and underlying greed. It has now become clear that such patterns of developments, lifestyles and quality of life are unsustainable. On the contrary, the developing countries are still struggling to attain the minimum levels of sustenance. No doubt, they too have contributed to the eco-degradation and pollution, but this is essentially needed and poverty based issue. Thus, both over development in the industrialized world and under development in the developing countries pollute and eco-degrade the environment; former out of greed and the latter out of the dire need to eke out an existence. The countries need abundant material growth to fulfil the basic needs of their people, but they cannot afford to repeat the mistakes of the industrial countries. Decades ago, when environment was not a buzz word, Mahatma Gandhi said that, “The earth provides enough to satisfy everyman’s needs, but not everyone’s greed”. This is the statement with profound social, economic, cultural and ethical ramifications.

The relationship between environment and mankind is indeed deep and has been recognised from the Vedic period. Furthermore, non-violence towards both animate and inanimate components of the biosphere had been ingrained as a guiding principle in the Indian psyche. Therefore, awareness and education of environment is the paramount concern of all the citizens of their society. Environment protection starts by creating awareness among the people so that it becomes part of their lifestyle. The key to achieving the objectives lies in the environmental education and its related programs. The objectives of environmental education include awareness, knowledge, attitude, skills and participation of people in protecting the environment.

2. Objectives of the study:

- a) To find out the difference of environmental awareness among science and arts students at under-graduate level in AMU.
- b) To compare the environmental awareness of Science and Arts male students at under-graduate level.

- c) To examine the difference of environmental awareness of science and arts female students at under-graduate level.
- d) To investigate the difference of environmental awareness of science male and female students at under-graduate level in AMU.
- e) To compare the environmental awareness of arts male and arts female students at under-graduate level in AMU.
- f) To find out the difference of environmental awareness between male and female students at under-graduate level in AMU.

3. Hypothesis of the study:

- a) There is no significant difference in Environmental Awareness among science and arts students at under-graduate level in AMU.
- b) There is no significant difference in Environmental awareness between science male and arts male students at under-graduate level in AMU.
- c) There is no significant difference in Environmental Awareness between science female and arts female students at under-graduate level in AMU.
- d) There is no significant difference of Environmental Awareness between Science male and science female students at undergraduate level in AMU.
- e) There is no significant difference of Environmental Awareness between Arts male and arts female students at under-graduate level in AMU.
- f) There is no significant difference of Environmental Awareness between male and female students at under-graduate level in AMU.

4. Significance of the study:

The present investigation was carried out with the purpose of studying environmental awareness among Arts and Science Faculty students. The issue of Environmental Education has been discussed at several national and international seminars, workshops, conferences of deliberation at Fourx in 1971 and at Stockholm in 1972. The Stockholm conference (1972) stressed specifically on the need for promoting awareness of environmental issue. In Belgrade Charter also, developing environmental awareness was started as one of the objectives of Environmental Education. Thus awareness was selected as it provides the basis for developing a positive attitude

towards the appreciation of different environmental problems and inspires one for actively participating in the program for conserving nature and preventing further deterioration. Awareness is the key to conservation. Also, the study was carried out on under graduate students because the most pressing need is to bring out basic level of awareness about environment and its concerned problems that occurred due to human activity.

5. Methodology and design of the study:

Sample size:

The present study consists of sample of 200 students taken from different departments of Arts and Science faculties of Aligarh Muslim University. The sample of the total cluster of students studying in Under-Graduate classes in different department of Arts and Science faculties was selected by using stratified random sampling.

Table-1: Showing sample distribution:

| S. No. | Groups | Science | Arts | Total |
|--------|--------|---------|------|-------|
| 1. | Female | 50 | 50 | 100 |
| 2. | Male | 50 | 50 | 100 |
| Total | | 100 | 100 | 200 |

Tools used for the study:

A standardized Environmental Awareness Ability Measure (EAAM) conducted by Dr. Praveen Kumar Jha, professor, P.G. Department of Psychology, T.P. College, Madhipura (B.N. Mandal University), Bihar, is used by the investigator for measuring the environmental awareness of college and university students.

Statistical techniques used:

The investigator used Mean, Standard Deviation (SD) and t-test statistical techniques for the purpose of data analysis.

6. Analysis and interpretation of data:

Table 2: The following table shows the comparison of environmental awareness between under-graduate students of Arts and Science faculties.

| Sources of Variation | Number of Students | Mean (M) | Standard deviation (SD) | Degrees of freedom | 't' value | H.0 |
|----------------------|--------------------|----------|-------------------------|--------------------|-----------|----------|
| Science | 100 | 44.32 | 4.888 | 198 | 4.557 | Rejected |
| Arts | 100 | 38.46 | 6.272 | | | |

Interpretation:

The 't'-value in the table reveals that the students of Science and Arts faculties differed significantly in their environmental awareness. As the Table indicates, the mean of the students of Science is 44.32 and the mean of the Arts students is 38.46. The standard deviation of students of science faculty is 4.888 and the standard deviation of Arts students is 6.272. The 't'-value was 4.557, found to be significant at 0.01 level of confidence of environmental awareness between Science and Arts faculties of A.M.U. The difference of environmental awareness between Science and Arts students may be because of their course stream.

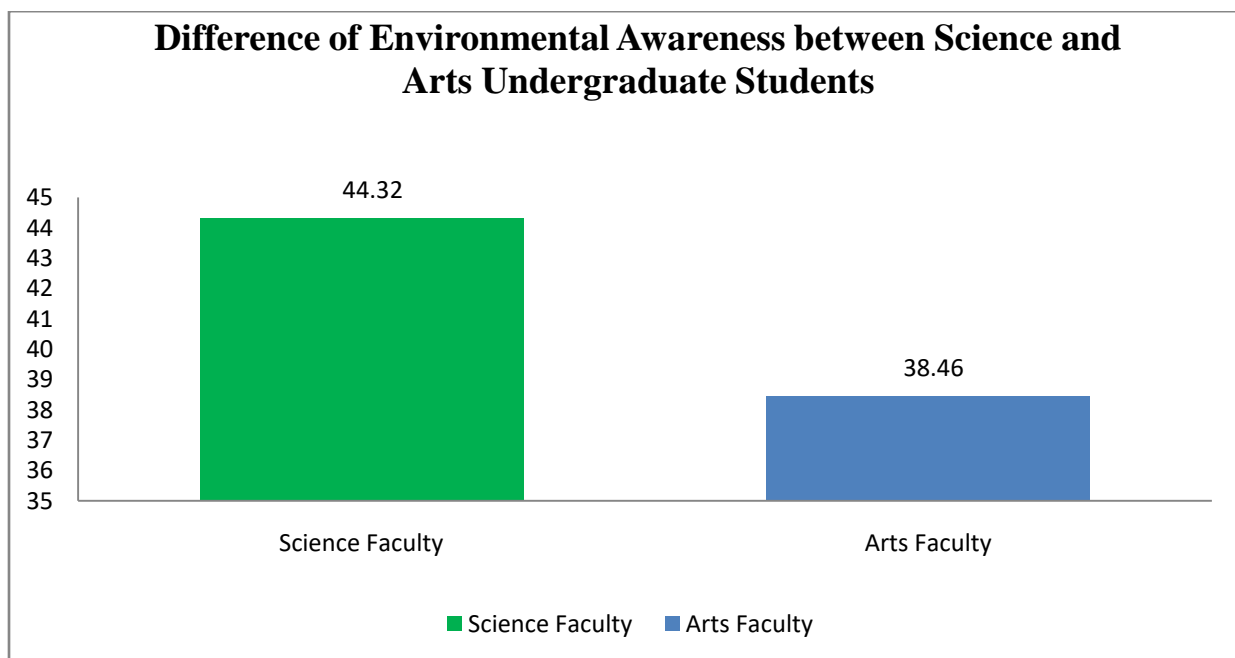


Fig-1: Showing the comparison of Environmental Awareness of Science and Arts students at Arts and Science faculty in A.M.U.

Table-3: The following table shows the comparison of environmental awareness between the Science and Arts Male under-graduate students in AMU.

| Sources of Variation | Number of Students | Mean (M) | Standard deviation (SD) | Degree of freedom | 't' test | H.0 |
|----------------------|--------------------|----------|-------------------------|-------------------|----------|----------|
| Science Male | 50 | 43.28 | 5.034 | 98 | 3.837 | Rejected |
| Arts Male | 50 | 37.84 | 7.360 | | | |

Interpretation:

The 't'-value in the table shows that there is significant difference of Environmental Awareness between Science and Arts Male students at undergraduate level. As the table shows, the mean scores of Science and Arts Male students are 43.28 and 37.84 respectively.

The standard deviation of Science faculty Male students is 5.034 and the standard deviation of Arts faculty Male students is 7.360 at under-graduate level. The 't'-value, 3.837 was found to be significant at 0.01 level of confidence which is higher than the calculated 't'-value (2.63). Thus, it shows that there is a true difference of Environmental Awareness between the Science and Arts Male under-graduate students of A.M.U. The greater mean value of science male shows that they are more concerned about environmental issues than the arts male students. The reason may be their subject's contents which always try to lay much more emphasis on environmental issues like pollution, causes of pollution, sources and uses of energy, conservation of resources, biodiversity, remedial measures etc.

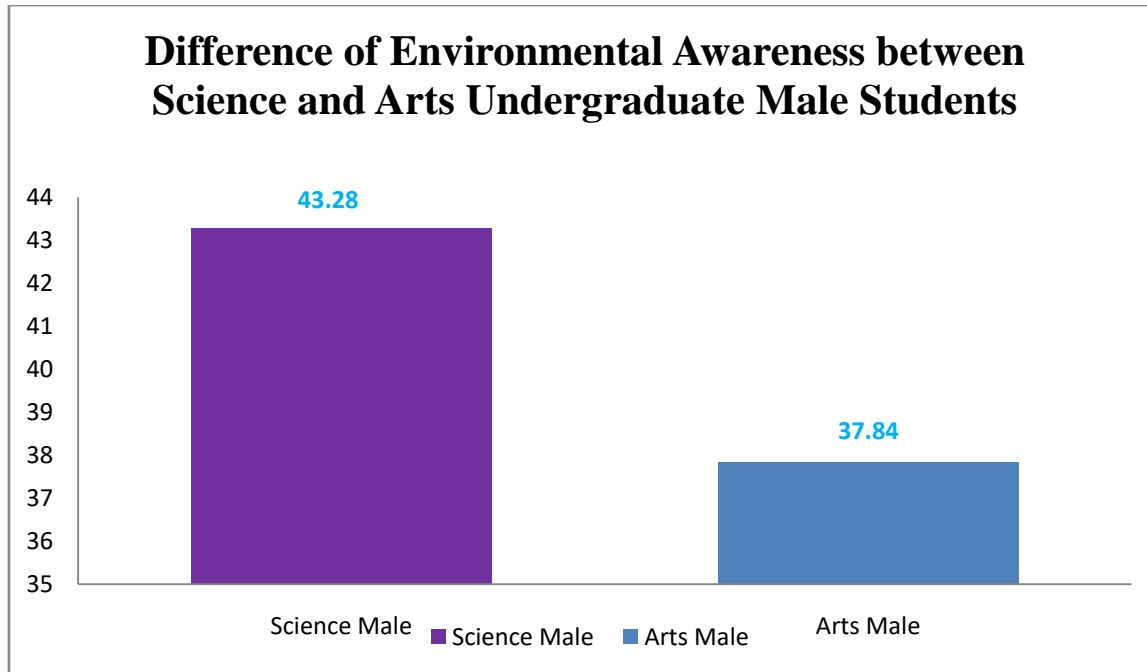


Fig-2: Showing the comparison of Environmental Awareness of Science and Arts Male students at under-graduate level in A.M.U.

Table-4: The comparison of Environmental Awareness between Science and Arts Female undergraduate students of A.M.U.

| Sources of variation | Number of students | Mean (M) | Standard deviation (SD) | Degree of freedom | 't' value | H.0 |
|----------------------|--------------------|----------|-------------------------|-------------------|-----------|----------|
| Science female | 50 | 45.36 | 3.058 | 98 | 2.895 | Rejected |
| Arts female | 50 | 39.08 | 4.952 | | | |

Interpretation:

The 't'-value in the table shows that there is significant difference in Environmental Awareness between Science and Arts female under-graduate students of A.M.U. The result shows that the mean value of Science 45.36 is higher than the mean value of Arts female students 39.08. The S.D. of Science female is 3.058 while the S.D. of Arts female students is 4.952. The 't'-value is found $t = 2.895$ which means that there is significant difference of environmental awareness

between Science and Arts female under-graduate students of A.M.U. Therefore the hypothesis H.0-3 is rejected. The greater mean value of science female students shows that they are more aware about environmental matters than the arts female students. The reason may be the influence of their subject's contents which always tries to lay much more emphasis on environmental aspects like pollution, causes of pollution, conservation of resources etc.

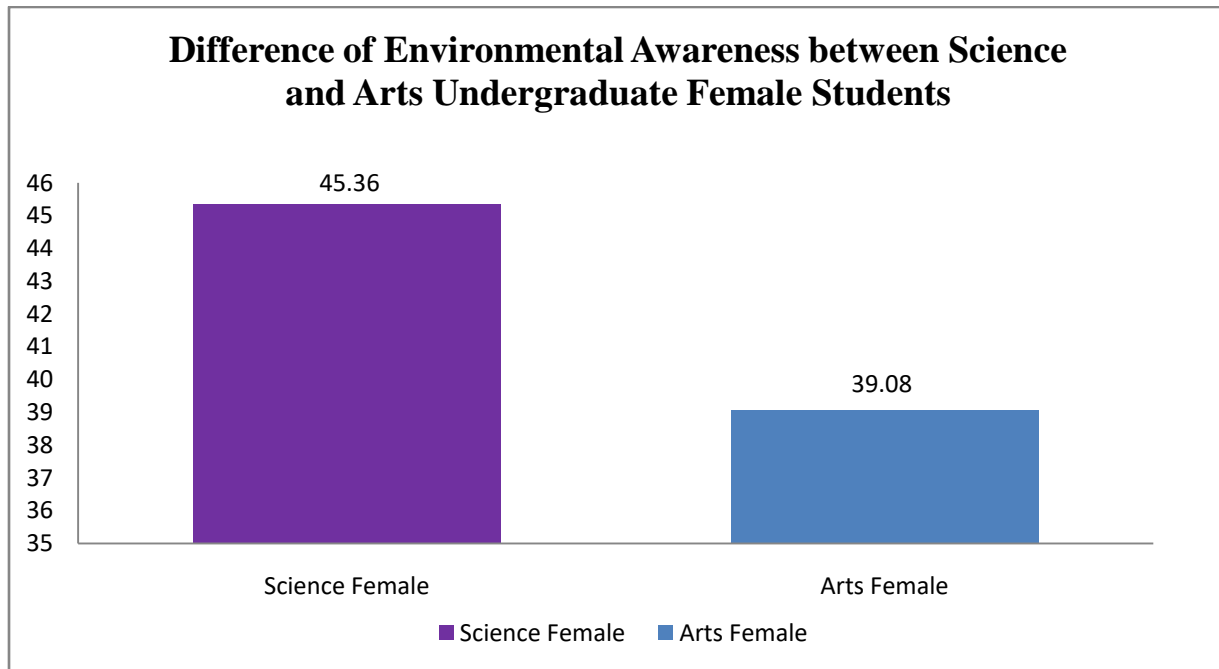


Figure-3: Showing the comparison of Environmental Awareness of Science and Arts female under-graduate students of A.M.U.

Table-5: The comparison of environmental awareness between Science Male and Female under-graduate students of A.M.U.

| Sources of variation | Number of students | Mean (M) | Standard deviation(SD) | Degree of freedom | 't' test | H.0 |
|----------------------|--------------------|----------|------------------------|-------------------|----------|----------|
| Science Male | 50 | 43.28 | 5.034 | 98 | 3.374 | Rejected |
| Science Female | 50 | 45.36 | 4.552 | | | |

Interpretation:

The 't' value in the table reveals significant difference about environmental awareness between Science Male and Female under-graduate students of A.M.U. Hence null hypothesis H₀₋₄ was rejected. The results presented in the table show that the girls (M= 45.36) of science faculty are more concerned about environmental issues as compared to the boys (M=43.28) of the same faculty. The 't'-value 3.374 is very much significant at 0.01 level of significance. Hence the environmental awareness between Science Male and Female under-graduate students of AMU is not due to chance. The invigilator did not find any valid reason for such variation.

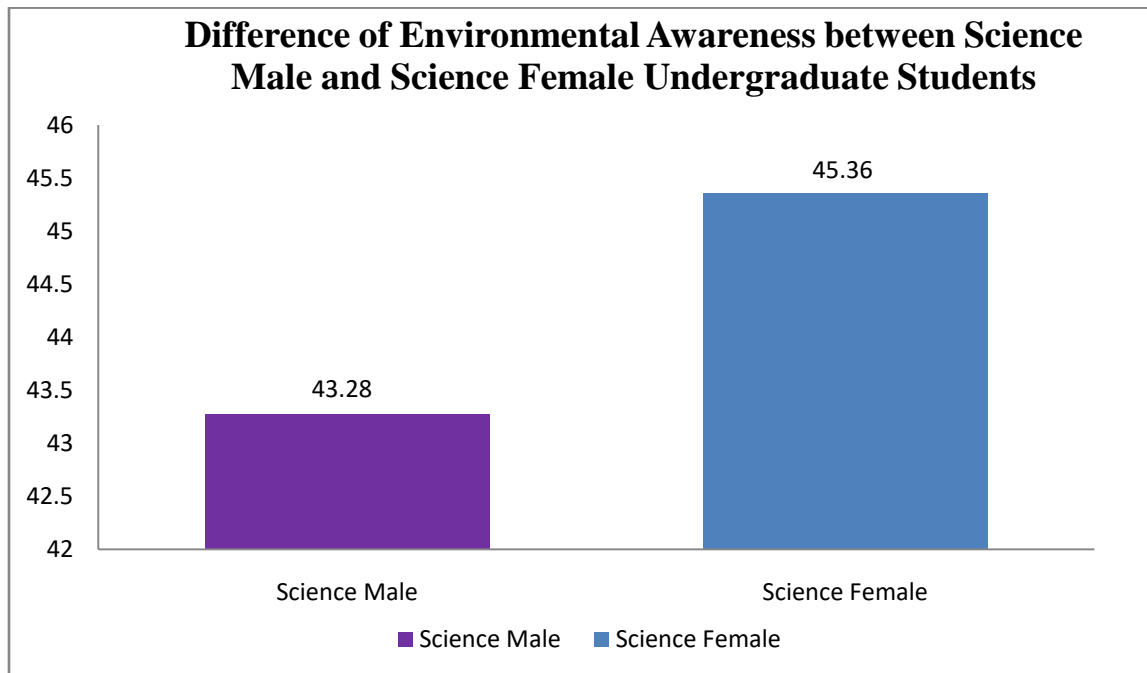


Figure-4: Showing the comparison of Environmental Awareness of Science Male and Female under-graduate students of A.M.U.

Table-6: The comparison of environmental awareness between Arts Male and Female under-graduate students of A.M.U.

| Sources of variation | Number of students | Mean(M) | Standard deviation(SD) | Degree of freedom | 't' test | H ₀ |
|----------------------|--------------------|---------|------------------------|-------------------|----------|----------------|
| Arts Male | 50 | 37.84 | 7.360 | 98 | 3.029 | Rejected |
| Arts Female | 50 | 39.08 | 4.952 | | | |

Interpretation:

The 't'-value in the table reveals significant difference about environmental awareness between Arts Male and Female under-graduate students of A.M.U. Hence null hypothesis H₀₋₅ was rejected. The results presented in the table show that the girls (M= 39.08) of Arts faculty are more concerned about environmental issues as compared to the boys (M=37.84) of the same faculty. The 't'-value 3.029 is very much significant at 0.01 level of confidence. Hence the environmental awareness between Arts Male and Female under-graduate students of AMU is not due to chance. The invigilator did not find any valid reason for such variation.

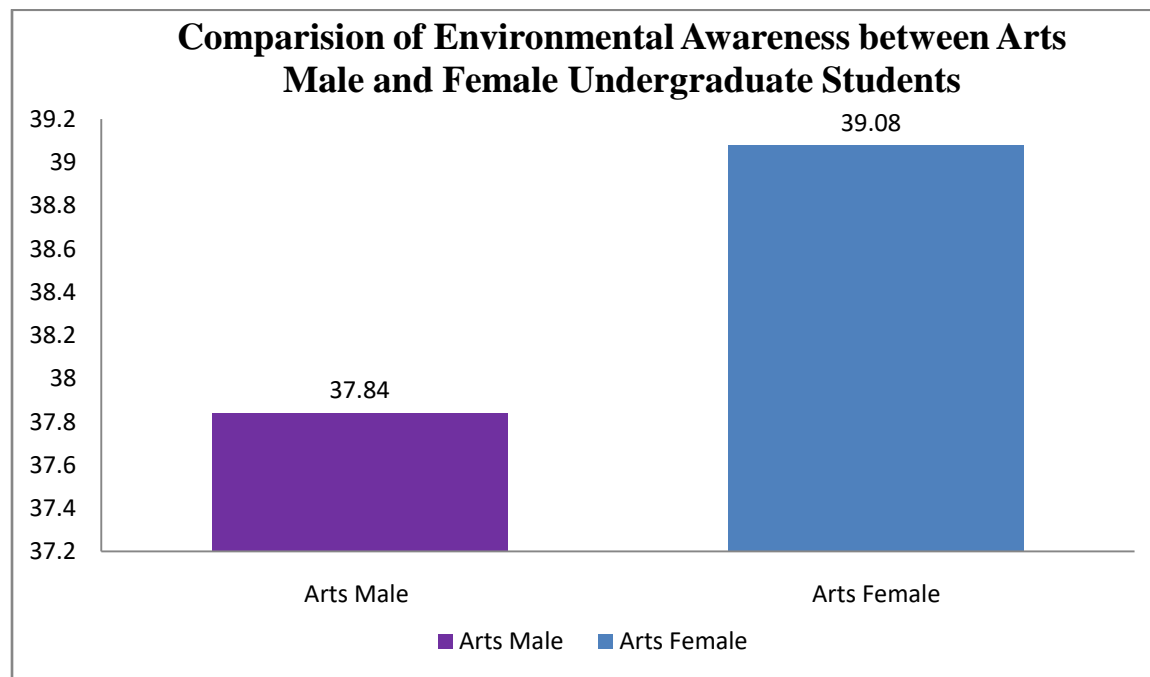


Figure-5: Showing the comparison of Environmental Awareness of Arts Male and Female undergraduate students of A.M.U.

Table-7: The comparison of environmental awareness between Male and Female under-graduate students of A.M.U.

| Sources of variation | Number of students | Mean (M) | Standard deviation(SD) | Degree of freedom | 't' test | H.0 |
|----------------------|--------------------|----------|------------------------|-------------------|----------|----------|
| Male | 100 | 40.56 | 4.30 | 198 | 4.085 | Rejected |
| Female | 100 | 42.22 | 3.82 | | | |

Interpretation:

The 't'-value in the table reveals significant difference about environmental awareness between Male and Female under-graduate students of A.M.U. Hence null hypothesis H.0-6 was rejected. The results presented in the table shows that the girls (M= 42.22) are more concerned about environmental issues as compared to the boys (M=40.56). The 't'=4.085 is found to be significant at 0.01 level of confidence which is much higher than the Table value-2.60. The 't' value confirms that male and female students differ in their environmental attitude and awareness at undergraduate level in A.M.U., therefore the null hypothesis is rejected. The researcher did not find any valid reason for such difference between Male and Female Students about Environmental issues.

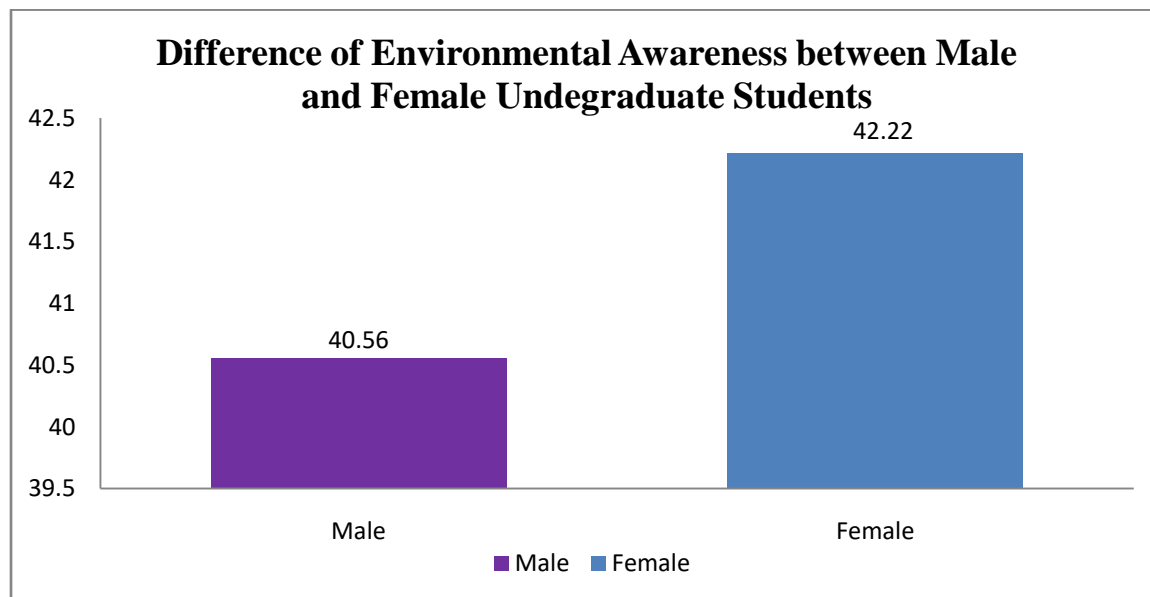


Figure-6: showing the comparison of Environmental Awareness of Male and Female undergraduate students of A.M.U.

7. Conclusion:

The present investigation was an attempt to see the effect of streams of education and gender on environmental awareness of pupils of under-graduate Arts and Science faculties of AMU. It is proved from the result that all the students have a positive attitude towards environmental awareness but the Science faculty students exhibit somewhat higher degree of environmental awareness than the Arts faculty students. Another significant result is that female students and male students differ in their awareness ability about the environment, female students have more concern than the male students. It shows that gender difference is important in developing environmental awareness. Both the male and female students have more knowledge and understanding of environmental issues, problems, probable measures for the preservation and conservation of the environment. Therefore science subjects have a positive effect on environmental awareness of the students. The in-depth investigation has led to the conclusion that it is the study of environmental education as a separate subject which develops environmental awareness at schools. As the students of science stream are studying environmental education as a separate subject, therefore they are more concerned about their environment in comparison to arts students who are studying environmental education as an integrated subject.

References:

- **Best, J. W. & Kahn, J. V.** (2008). *Research in Education* (10th edition). New Delhi: Prentice Hall of India.
- **Chauhan, S.S.** (2002). *Advanced Educational psychology*. New Delhi: Eurasia Publishing House Pvt. Ltd.
- **Krishnamaracharulu, V. R. GS.** (2005). *Environmental Education: Aims and Objectives of Environmental Education: Importance of Environmental Education*. Hyderabad: Neelkamal Publications Pvt. Ltd.
- **Nagarajan, K., Sivakumar, P., Nithyasri, N., & Srinivasan, R.** (2010). *Environmental Education*(2nd edition). Chennai: Ram Publishers.

- **Senapati, T. &Sahoo, R. K.** (2009). *Environmental Education and Pollution Control*. New Delhi: Mittal Publications.
- **Harma, R.C.** (1981).*Environmental Education*. New Delhi: Mittal Publications.
- **Singh, S.** (2010). *Environmental Geography*. Allahabad: PrayagPustakBhawan.
- **Bandhopadhyay, J** (ed.), 1985, *India's Environment, Crisis and Response*.
- **Centre for Science and Environment**, 1991, *Flood, Flood Plains and Environmental Myths*, CSE, New Delhi.
- **Sumi Krishna**-*Environmental Politics, people lives and development choices*, sage New Delhi 1996.
- **Dimento Joseph** 1989, can social science explain organizational non-compliance with environmental law, *social issues* 45(1)
- **Balachandran, S. (2013)**.*A Study of Environmental Awareness and Environmental Ethics Among the Secondary and Higher Secondary School Students of Greater Mumbai*. Department of Education, Shri JagdishprasadJhabarmalTibrewala University, Rajasthan.
- **M. Saud P.P (1994)**: “A study of environmental awareness in High School Students of AMU”. M.Ed. Dissertation, AMU, Aligarh.
- **NasreenNakhatPh.D Thesis (1993)**: “Attitude of college and University teachers toward environmental concerns”. Ph.D (1993), Department of Education, AMU, Aligarh.
- **Raj Kumar Singh, M.Ed. Dissertation (1996)** “A comparative study of Environmental Awareness in School Children of Aligarh”. M.Ed. Dissertation, Department of Education, AMU, Aligarh.
- **UsmaniQudisia, M.Ed. Dissertation 1995**: A study of environmental awareness in primary school Children at Shahajanpur” M.Ed. Dissertation, AMU Aligarh.