

A study of the Environmental Attitude and Teaching Practices of Secondary School Teachers in Mahabubnagar District

M. Govinda Raju

Government College of Teacher Education, Mahabubnagar-509001, Telangana State, India

Email : govtcte_mbnr@yahoo.co.in

ABSTRACT

The purpose was through multivariate analysis, to examine Secondary School Teachers' environmental attitude and teaching practices in relation to selected environmental data. Participants were male and female secondary school teachers with teaching experience of 0-5, 6-15 and above 15 years in the subjects Arts/Social or Science, working in different sectors such as government, Zillaparishad and private schools, place of working is urban and rural, with their academic qualifications graduate and post-graduate. The data collected from the secondary school teachers are from erstwhile Mahabubnagar district. The basis of this investigation was the researchers' argument that it is important for secondary school teachers have the environmental attitude and teaching practices at the secondary level. For this purpose the investigator has used questionnaire comprising of 50 statement with five point Likert scale to record their responses on the scale and another appendix is enclosed to find out the teaching practices of the secondary school teachers of the erstwhile Mahabubnagar with the five point scale of Likert with the positive and negative with 59 statements. The investigator administered and obtained the scores and analyzed the data where there exists significant different in the male and female and rural and urban secondary school teachers but not shown any significant difference. No significant results were established in the case of government, zillaparishad and private school secondary school teachers. The researchers argue that these findings are important because it is the teachers who will hopefully pass on the same message to students for the protection of the environment. The major objective of the study is to find out the 600 male and female secondary school teachers attitude and teaching practices towards the environmental education. Variables of the study are male and female as the independent and rural, urban, government, zillaparishad and private, urban, rural, academic qualifications such as graduate and post graduate, and the teaching experiences. **Key words:** *Cyprinus carpio*, Lesenta, Insecticide, Haematology, RBC, WBC, Hb.

Key words: Environment attitude, teaching practices, secondary school teachers.

INTRODUCTION

The 21st century has seen major developments in terms of industrialization throughout the world. As a resultant movement of communities from rural arrears to urban areas, the influx has brought strain that has impacted negatively on the environment. For instance, all over the world fossil fuels such as coal and crude oil are still the main source of energy. These movements of large number has impacted on the people and the environment alike. The demands of the people effected the entire environment and the need of the secondary school teachers intervention is very much needed by their teaching practices and interest towards encouraging students towards positive attitude towards the environment.

Attitude and Teaching practices of the secondary school teachers towards environment. To provide perspective of the important of Attitude and Teachign practices towards environmental education some literature on these aspects is outlined. Researcher such as Hines etal. (186/97) have reported that it is not know which variable or variables is most influential in motivating the individuals into taking responsible environmental action.

How to Cite this Article:

M Govinda Raju (2021). A study of the Environmental Attitude and Teaching Practices of Secondary School Teachers in Mahabubnagar District. *Biolife*. 9(3), 1-6. DOI:10.17812/blj.2021.9301.

Received: 12 May 2021; Accepted : 21 July 2021;
Published online: 3 August 2021

In the present study awareness means the consciousness of the Teachers towards environment problems which lay emphasis on effective Teaching.

Environment: - It is defined more comprehensively as a holistic view of the world as it functions at any point of time, with the multiple of spatial, elemental and socio economic systems, distinguished by Quality and attributes of space, and mode of behavior of abiotic and Biotic forms.

Secondary School Teachers: - The teacher who are teaching in the high school for VIII, IX and X classes.

Definitions:- According to Pestalozzi:- "Education is the natural Harmonious and progressive development of man's innate powers."

In the words of Dewey: "Education is the process living through a continuous reconstruction of experiences."

According to "Swami Vivekananda": "Education is the manifestation of perfection already in man."

Need and Significance of the study

As a man becomes a more and more urbanized, his intimate association and interaction with natural resources get diminished and with it the awareness of his dependency on them. Yet it is imperative that man, wherever he lives comprehend, that his welfare is dependent as the proper management and use of these resources. Man should also have an awareness and understanding the problems of community; it., lack of comprehensive environmental planning, indiscriminate use of pesticides, air and water pollution and traffic. Congestion and lack of institutional arrangements, deforestation, needed to compete effectively with environmental problems.

People everywhere should realize the importance and urgency of saving wild life animals, wild plants, and wild places for further generation. The preservation environment has assumed a great importance in recent times. There is an urgent need to stop deserting our heritage and start preserving and protecting our environment once again, launching the programme to create public awareness about environmental protection and its importance bettering the life of the people.

The present study is intended to find out the nature and extent of awareness among secondary school Teachers towards in the areas of air pollution, water pollution, soil pollution, sound pollution and environmental legislations.

Also, it intends to find out the influence of different factor such as the sex of the Teachers, sector (Government, Zillaparishad, Private), area of specification (subject) Art, Science, Social, Place of working (locality) (Urban, Rural), Academic qualifications (Graduate, Post Graduate), Teaching Experience (0-5, 6-15 and 15 above) towards environmental awareness of Teachers.

Statement of the Problem

A problem chosen for the present study is "A study of the Environmental Awareness among Secondary School Teachers in Mahabubnagar District of Telangana State."

Objectives of the Study

1. To find out environmental awareness in secondary school Teachers of different. Sex/gender that is male and female.
2. To find out environmental awareness in secondary school Teachers of different sectors that is Government, Zillaparishad and Private.
3. To find out environmental awareness in secondary school Teachers of different areas of specification subject that is Arts, Science and Social
4. To find out environmental awareness in secondary school Teachers of different Place of working or locality that is Urban and Rural.
5. To find out environmental awareness in secondary school Teachers of different Academic qualifications that is Graduate and Post Graduate.
6. To find out environmental awareness in secondary school Teachers of different Teaching Experiences that is 0-5, 6-15 and 15 above.

Hypothesis of the Study

On attitude of the secondary school teachers towards environmental education.

1. There is no significant difference in the environmental attitude among the male and female Secondary School Teachers.
2. There is no significant difference in the environmental attitude among the Government and Zilaparishad and Private Secondary School Teachers.
3. There is no significant difference in the environmental attitude among the Urban and Rural Secondary School Teachers.
4. There is no significant difference in the environmental attitude among the Graduation and Post-Graduation Secondary School Teachers.
5. There is no significant difference in the environmental attitude among the 0-5, 6-15 and Above 15 years of Teaching Experience years of Teaching Experience Secondary School Teachers.
6. There is no significant difference in the environmental attitude among the Art/Social and science Secondary School Teachers.

Hypothesis on teaching practices of the secondary school teachers towards environmental education.

1. There is no significant difference in the classroom teaching practices related to environmental education among Male and Female Secondary School Teachers.
2. There is no significant difference in the classroom teaching practices related to environmental education among Government, Zillaparishad and private Secondary School Teachers.

3. There is no significant difference in the classroom teaching practices related to environmental education among Arts and Science Secondary School Teachers.
4. There is no significant difference in the classroom teaching practices related to environmental education among Urban and Rural Secondary School Teachers.
5. There is no significant difference in the classroom teaching practices related to environmental education among Graduation and Post-Graduation Secondary School Teachers.
6. There is no significant difference in the classroom teaching practices related to environmental education among 0-5, 6-15 Years and above 15 years of Teaching Experience Secondary School Teachers.

Population and Sample

The study was conducted a sample of 600 teachers.. This sample was selected by stratified random sampling technique giving due representation to factor like gender, sector/management, area of specification, area/place of working, academic qualification, teaching experiences.

Table-1. Selected population and sample

Sl. No.	Survey Area	Category	Sample
1.	Sex/Gender	1). Male 2). Female	300 300
2.	Sector/Management	1). Govt 2). ZP 3). Pvt	200 200 200
3.	Areas of Specification	1). Arts/ Social 2). Science	300 300
4.	place of working	1). Urban 2). Rural	300 300
5.	Academic Qualifications	1). Graduate 2). Post Graduate	300 300
6.	Teaching Experience	1). 0-5 2). 6-15 3). 15 Years above	200 200 200

Instrumentation

Research tools have been adopted to aid in the acquisition of data. Tools are many kinds and employ distinctive ways of describing and quantifying the data.

In the present investigation questionnaire and attitude scales were used for the collection of relevant data.

1. Questionnaire:

Questionnaire is a device for securing answers to questions by using a form which the respondent fill by himself. The questionnaire is one of the most widely used data gathering device. It is one of the most flexible, of the tools in collecting both qualitative and quantitative information. A properly constructed and administrated

questionnaire may service as the most appropriate and useful tool. The investigator collected one hundred and fifty questions (150) including all aspects of environmental awareness. For collecting the questionnaire the investigator referred several books and journals. The questionnaire was divided into six areas.

1. Air Pollution
2. Water Pollution
3. Sound Pollution
4. Soil Pollution
5. Forests
6. Environmental Legislations.

2. Attitude Scale:

Attitude scale towards Environmental education teaching practices of secondary school Teachers in Mahabubnagar district has been tested and standardized by the means of validity and reliability by the investigator in consultation with the research subject experts. And the areas covered under investigation are teaching practices by the secondary teacher of various managements towards the inculcation of awareness about the environmental education in the students in the following areas as whole.

1. Air Pollution
2. Water Pollution
3. Sound Pollution
4. Soil Pollution
5. Forests
6. Environmental Legislations.

Collection of data:

The sample selected for the study was "A study of the environmental Awareness among secondary School Teachers in Mahabubnagar district." The investigator visited some of the schools located both in rural and urban areas. The investigator personally administered the Questionnaire to the subjects and necessary raport was established. Every possible precaution was taken to obtain reliable response from the subjects. Time given to answer was 1 hour 40 Minutes. The performance of the each Teacher was assessed.

Though 150 questions were administered only 59 could finally be taken for analysis because others had to be discarded as they were either in complete or unreliable in the Attitude scale towards environmental education teaching practices of secondary school teachers in Mahabubnagar district checklist in which 50 statements were taken out of 150 for statistical analysis.

Analysis of DATA:

The data thus collected from the sample. The study was tabulated and subjected to analysis. Statistical Techniques used for Analysis: -

The collected data analyzed using suitable statistical Techniques. The data can be analyzed by the help of mean, median, standard deviation, t-test significance at 0.05 level.

Interpretations and discussions:

1. Hypothesis between Male and Female on environmental attitude: - There is no significant difference in the environmental attitude among the male and female Secondary School Teachers.

Table-2. Mean values of the sample population

Variables	N	Mean	SD	T-Value
Male	280	188.9571429	15.95642428	4.498986803
Female	320	183.275	14.81418874	

From the above [table - 2](#) it is found that the mean value of the 300 male Secondary School Teachers is 188.9571429 and 300 female Secondary School Teachers is 183.275, standard deviation of male is 15.95642428 and of the female is 14.81418874. Where the mean value of the male is greater than female and standard deviation of the male is greater than the female and the obtained t-value 4.498986803 and where table t-value at 0.05 level were found to be 1.96 is greater than the obtained/calculated t-value.

Therefore the null hypothesis is rejected. This means there is significant difference in the environmental attitude among the male and female secondary school teachers.

2. Hypothesis between Government and Zilaparishad on environmental attitude: - There is no significant difference in the environmental attitude among the Government and Zilaparishad Secondary School Teachers.

Table-3. Mean and SD values of the GSST, ZSST

Variables	N	Mean	SD	T-Value
Government	152	181.6315789	15.55067947	-2.520845079
Zilaparishad	220	185.7818182	15.6942137	

From the above [table - 3](#) it is found that the mean value of the 152 Government Secondary School Teachers is 181.6315789 and 220 Zilaparishad Secondary School Teachers is 185.7818182, standard deviation of Government Secondary School Teachers is 15.55067947 and of the Zilaparishad Secondary School Teachers is 15.6942137. Where the mean value of the Government Secondary School Teachers is greater than Zilaparishad Secondary School Teachers and standard deviation of the Government Secondary School Teachers is less than the Zilaparishad Secondary School Teachers and the obtained t-value 2.520845079 and where table t-value at 0.05 level were found to be 1.96 is less than the obtained/calculated t-value.

Therefore the null hypothesis is rejected. This means there is significant difference in the environmental attitude

among the Government Secondary School Teachers and Zilaparishad Secondary School Teachers secondary school teachers.

3. Hypothesis between Government and Private on environmental attitude: - There is no significant difference in the environmental attitude among the Government and Private Secondary School Teachers.

Table-4. Mean and Standard Deviation values of Government Secondary School Teachers, Private Secondary School Teachers.

Variables	N	Mean	SD	T-Value
Government	152	181.6315789	15.55067947	-4.554731375
Private	228	188.9298246	14.92165697	

From the above [table-4](#) it is found that the mean value of the 152 Government Secondary School Teachers is 181.6315789 and 228 Private Secondary School Teachers is 188.9298246, standard deviation of Government Secondary School Teachers is 15.55067947 and of the Private Secondary School Teachers is 14.92165697 and the mean value of the Government Secondary School Teachers is less than the Private Secondary School Teachers and standard deviation of the Government Secondary School Teachers is greater than the Private Secondary School Teachers and the obtained t-value -4.554731375 and table t-value at 0.05 level were found to be 1.96 which is less than the obtained/calculated t-value.

Therefore the null hypothesis is rejected. This means there is no significant difference in the environmental attitude among the Government Secondary School Teachers and Private Secondary School Teachers.

4. Hypothesis between Arts/Social and Science secondary school teachers on environmental attitude: - There is no significant difference in the environmental attitude among the Arts/Social and Science Secondary School Teachers.

Table-5. Mean and standard deviation values of the Arts/Social Secondary School Teachers and Science Secondary School Teachers

Variables	N	Mean	SD	T-Value
Arts/Social	184	182.4347826	15.38667676	-3.690971453
Science	416	187.4711538	15.46886915	

From the above [table-5](#) it is found that the mean value of the 184 Arts/Social Secondary School Teachers is 182.4347826 and 416 Science Secondary School Teachers is 187.4711538, standard deviation of Arts/Social Secondary School Teachers is 15.38667676

and of the Science Secondary School Teachers is 15.46886915 and the mean value of the Arts/Social Secondary School Teachers is less than the Science Secondary School Teachers and standard deviation of the Arts/Social Secondary School Teachers is less than the Science Secondary School Teachers and the obtained t-value is -3.690971453 and table t-value at 0.05 level were found to be 1.96 which is greater than the obtained/calculated t-value.

Therefore the null hypothesis is rejected. This means there is significant difference in the environmental attitude among the Arts/Social Secondary School Teachers and Science Secondary School Teachers

5. Hypothesis between Urban and Rural secondary school teachers on environmental attitude: - There is no significant difference in the environmental attitude among the Urban and Rural Secondary School Teachers.

Table-6. Mean and standard deviation values of the Urban Secondary School Teachers and Rural Secondary School Teachers

Variable s	N	Mean	SD	T-Value
Urban	340	186.2823529	14.92131715	0.62979029
Rural	260	185.4615385	16.47375535	

From the above [table - 6](#) it is found that the mean value of the 340 Urban Secondary School Teachers is 186.2823529 and 260 Rural Secondary School Teachers is 185.4615385, standard deviation of Urban Secondary School Teachers is 14.92131715 and of the Rural Secondary School Teachers is 16.47375535 and the mean value of the Urban Secondary School Teachers is greater than the Rural Secondary School Teachers and standard deviation of the Urban Secondary School Teachers is less than the Rural Secondary School Teachers and the obtained t-value is 0.62979029 and table t-value at 0.05 level were found to be 1.96 which is less than the obtained/calculated t-value.

Therefore the null hypothesis is Accepted . This means there is no significant difference in the environmental attitude among the Urban Secondary School Teachers and Rural Secondary School Teachers

6. Hypothesis between Graduation and Post Graduation secondary school teachers on environmental attitude: - There is no significant difference in the environmental attitude among the Graduation and Post Graduation Secondary School Teachers.

Table-7. Mean and standard deviation values of the Graduation Secondary School Teachers and Post Graduation Secondary School Teachers

Variables	N	Mean	SD	T-Value
Graduation	176	182.5454545	18.18062334	-3.119267529
Post Graduation	424	187.3301887	14.19001194	

From the above [table - 7](#) it is found that the mean value of the 176 Graduation Secondary School Teachers is 182.5454545 and 424 Post Graduation Secondary School Teachers is 187.3301887, standard deviation of Graduation Secondary School Teachers is 18.18062334 and of the Post-Graduation Secondary School Teachers is 14.19001194 and the mean value of the Graduation Secondary School Teachers is less than the Post-Graduation Secondary School Teachers and standard deviation of the Graduation Secondary School Teachers is greater than the Post Graduation Secondary School Teachers and the obtained t-value is -3.119267529 and table t-value at 0.05 level were found to be 1.96 which is greater than the obtained/calculated t-value.

Therefore the null hypothesis is rejected. This means there is significant difference in the environmental attitude among the Graduation Secondary School Teachers and Post-Graduation Secondary School Teachers.

7. Hypothesis between 0-5 years of Teaching Experience and 6-15 years of Teaching Experience secondary school teachers on environmental attitude: - There is no significant difference in the environmental attitude among the 0-5 years of Teaching Experience and 6-15 years of Teaching Experience Secondary School Teachers ([Table-8](#)).

Table-8. Mean and Standard Deviation values of different teaching experience variables

Variables	N	Mean	SD	T-Value
0-5 years of Teaching Experience	58	187.5862069	14.32827469	0.687597771
6-15 years of Teaching Experience	305	186.1508197	15.79692907	

Discussion

An important aspect about the scale used in this study is that the scores from it were internally consistent and valid. This suggests that the findings in a sense should not be attributed to chance. The important of these the finding with respect of Attitude and teaching practices were that teachers gender was a factor. This is not consistent with that reported by Shobeiri et al. (2007). On the other hand, it was in variance with studies reporting females with higher levels than males (see Davidson and Freudenburg

1996, Shahnawaj 19990 and those reporting males with higher levels than females (see Triphati 2000). With respect to age the researcher found that older secondary school teachers revealed lower levels of attitude compared to their younger counterparts. in the similar manner this was reported elsewhere (see Ma and Bateson 1999:

The pleasing aspect of here is that teachers had higher scores with respect to environmental attitude and teaching practices. So teachers had better attitude and practices in compare to the different subjects Good attitude and practices of their environment it will go a long way in shaping their attitude. On the contrary if they are not aware and knowledgeable they will worsen the situation. An advantage of the positive attitude and practices towards the environment is that these will be passed on from generation to generation.

Conclusions

1. Comparing the Environmental Attitude of Male and Female Secondary School Teachers it is found that there is significant difference tween them. However male teacher possesses more awareness in certain items.
2. Comparing the environmental attitude of urban and rural teachers. It is found that there is significant difference between Urban and rural teacher except in few items. Rural teachers possess favourable awareness towards forests and Soil Pollution.
3. Comparing the Environmental attitude of Science and Social teachers, found that there is significant difference between them. The study reveals that science teacher possess significantly Higher Percentage of awareness then arts teachers except in few items. The Science teachers play an important roll in making awareness about environmental pollution.
4. Comparing the attitude of the qualifications of the Teachers that is graduate and higher qualification (post graduate) Teachers it is found that there is no significant difference in the attitude of graduates and post graduate qualified teachers. However graduate teachers passes high attitude than post graduate Secondary school Teachers except in certain items.

Conflicts of Interest

Authors declare that there is no conflict of interests regarding the publication of this paper.

References

- [1] Best J.W. (1963) Research in Education, Prenlie Hall International Ltd.
- [2] R.C. Sharma (1998) A source book in environmental education of secondary school teachers.
- [3] Agarwal, Anil and Narain, Sunita (1991), Global warming in an un-equal world. centre for Science and Environment, New Delhi.
- [4] P.D. Sharma (2003) A Text Book on Ecology and Environment. Rastogi Publications, Meerut, India
- [5] VERma, P.S. And Agarwal, V.K. (1993) : Environment Biology, S. Chand Publications, New Delhi.
- [6] Karpagam .M (1991) : Environmental Economics and Environmental Policies, Sterling Publishers Private Limited.
- [7] M.B. Buch : 5th Survey of Educational Research Vol I, NCERT, New Delhi,.
- [8] B.P. Pal : Environmental conservation and development.
- [9] Indian Educational review, NCERT, New Delhi.
- [10] TRilochan S. Bakshi Naveh – Environmental Education Principles, Method and Applications Plenum press, New York & Londoy.
- [11] Engene Vivian (1976) : A source Book for Environmental Education C.V. Mosby Company St. Louis.
- [12] Desha Bandhu, N.L. Ramanathan, (1981) Education for environmental planning and conservation.
- [13] Derek Rowtree (1981) edition : A dictionary of Education. Harper of Row Publishers London.
- [14] UNESCO. "Environmental Education in the light of the Tbilisi conference : Education on the Move," (1980).
- [15] Gill J.S., "Environmental Education in the School Curriculum Development by the NCERT, Delhi (1995).