CHAPTER V

SUMMARY, CONCLUSION AND SUGGESTIONS

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CHAPTER V
SUMMARY, CONCLUSION AND SUGGESTIONS

5.1 INTRODUCTION

In the previous chapter an attempt was made to analyse the data and to interpret the results. The present chapter is concerned to summarize the findings and to draw conclusions from these findings. Moreover, the suggestions are made available to others who are interested in carrying out researches along the same lines. In this chapter, an attempt has been made to state the summary of the present research, conclusions and suggestions for further researches.

Good (1972) also suggests that the last chapter of 'Summarization and conclusions' looks backward and forward through consideration of applications, recommendations and needed research.

5.2 SUMMARY

5.2.1 OBJECTIVES

The major purpose of the present investigation was to investigate the attitude of students and teachers towards EH to education. More specifically the main objectives of the study were as under:

1. To measure the attitude of the Higher Secondary students and teachers towards EH to education.
2. To compare the attitude of boys and girls; urban, rural and tribal students towards EH to education.
3. To compare the attitude of male and female; urban, rural and tribal teachers towards EH to education.
4. To determine the difference in attitude between students and teachers towards EH to education.
5. To know which hazard is most effective in a particular habitation.

5.2.2 HYPOTHESES

A Hypotheses Pertaining to Students
1. The students have the favourable attitude towards EH to education.
2. There exists no significant difference between the attitude of boys and girls on EHAS.
3. There is no significant difference in the attitude of urban, rural and tribal students on EHAS.
4. There is no significant difference in the attitude of all six groups of students i.e. urban boys, urban girls, rural boys, rural girls, tribal boys and tribal girls.

B. Hypotheses Pertaining to Teachers
5. The teachers possess the favourable attitude towards EH to education.
6. There is no significant difference between the attitude of male and female teachers on EHAS.
7. There is no significant difference in the attitude of urban, rural and tribal teachers on EHAS.
8. There is no significant difference in the attitude of all six groups of teachers i.e. urban male, urban female, rural male, rural female, tribal male and tribal female groups.
9. Teachers and students do not differ significantly on EH attitude scale towards education.
10. There is no significant difference in attitude scores pertaining to hazard due to 'surroundings of the institution' between (i) boys and girls, (ii) urban, rural and tribal students, (iii) male and female teachers, (iv) urban, rural and tribal teachers, (v) students and teachers.

11. There is no significant difference in 'physical facilities' hazard attitude between (i) boys and girls, (ii) urban, rural and tribal students, (iii) male and female teachers, (iv) urban, rural and tribal teachers, (v) students and teachers.

12. There is no significant difference in 'television' hazard between (i) boys and girls, (ii) urban, rural and tribal students, (iii) male and female teachers, (iv) urban, rural and tribal teachers, (v) students and teachers.

13. There is no significant difference in 'over crowded classes' hazard attitude scores between (i) boys and girls, (ii) urban, rural and tribal students, (iii) male and female teachers, (iv) urban, rural and tribal teachers, (v) students and teachers.

14. There is no significant difference in 'politics and political power' hazard attitude scores between (i) boys and girls, (ii) urban, rural and tribal, (iii) male and female teachers, (iv) urban, rural and tribal teachers, (v) students and teachers.

15. There is no significant difference in 'teaching methods' hazard attitude scores between (i) boys and girls, (ii) urban, rural and tribal students, (iii) male and female teachers, (iv) urban, rural and tribal teachers, (v) students
and teachers.

5.2.3 DELIMITATION

The study has been delimited by the following considerations:
(i) The study was confined to the Raipur Educational division only.
(ii) The sample was taken from male and female students studying in class XI belonging to urban, rural and tribal areas.
(iii) The sample was taken from urban, rural and tribal; male and female teachers of the Higher Secondary Schools.

5.2.4 METHOD

In order to prove these hypotheses the 'Survey Method' was employed. The present study was largely based on the 'normative survey' method. Wherever necessary, a comparative study was also made.

5.2.5 SAMPLE

The sample consisted of 300 class eleventh students and 240 Higher Secondary teachers selected from 25 different schools of Raipur Educational division. Stratified Random Sampling and Purposive Sampling were adopted to give due consideration to the location of the schools (urban/rural/tribal) and various types of schools (government, private aided, private unaided, girls, boys, and co-education).

5.2.6 TOOL

For measuring the EH attitude a tool 'Environmental hazards attitude scale' was constructed by the investigator using Likert method. The scale content was
decided on the basis of the judges questionnaire. Items related to the six educational hazards, these are surroundings of the institution, physical facilities, television, over crowded classes, politics and political power and methods of teaching. The techniques of tryout and item analysis were used for refining the test. Face validity and content validity were employed. Test-retest as well as the split-half reliability coefficients were calculated.

5.2.7 STATISTICAL TECHNIQUES USED

The responses obtained from the students and teachers were treated statistically in accordance with the purpose of the study. The various statistical techniques employed were:

Frequency distribution, central tendencies, skewness, kurtosis, standard deviation, critical-ratio, analysis of variance and 't' test. Within group norms were derived for raw scores obtained on the EHAS (Environmental Hazards Attitude Scale).

5.3 FINDINGS

The findings of this investigation were summarized below:

5.3.1 Findings related to the EHAS

Among Students
1. The performance of students in general come under the category of favourable attitude i.e. 78.67% students possess positive attitude, 20.00% students possess neutral attitude while 1.33% students possess moderately low attitude towards EH to education and support the first hypothesis to be
2. Both the boys and girls possess positive attitude. They do not differ significantly on EHAS (C.R.=0.87, df=298). They have the similar attitude towards EH to education (boys mean=171.17, girls mean=172.67), and support the hypothesis second to be retained.

3. The attitude of urban students (M = 180.52) is significantly higher in comparison to that of rural (M = 171.04) and tribal (M = 164.20) students. The three groups differ significantly from each other (F=16.83, df=2,297, P<.01). To verify the above result, t-was calculated, the findings were:
The urban and rural students' (t=5.12, df=198, P<.01), urban and tribal students' (t=8.76, df=198, P<.01) and rural and tribal students' (t=3.63, df=198, P<.01) groups differ significantly as regard to their attitude on EHAS and does not support the hypothesis third.

4. All the six groups differ significantly on EH attitude scale ( F=9.76, df=5,294, P<.01 level ). To verify the significant difference between different groups of students, t-was calculated the findings were:
(a) The mean scores difference between urban boys (M=179.54) and urban girls (M=181.50) was found to be insignificant (t=0.82, df=98), rural boys (M=170.58) and rural girls (M=171.50) was found to be insignificant (t=0.42, df=98), and tribal boys (M=163.76) and tribal girls (M=164.64) was also found to be insignificant (t=0.35, df=98).
(b) There is significant difference between urban boys and rural boys \((t=4.03, \text{df}=98, P<.01)\), urban boys and tribal boys \((t=7.01, \text{df}=98, P<.01)\), and rural boys and tribal boys \((t=3.07, \text{df}=98, P<.01)\) in their attitude. The urban boys \((M=179.54)\) possess more favourable attitude than rural boys \((M=170.58)\), while tribal boys \((M=163.76)\) possess less favourable attitude than rural boys on EHAS.

(c) It was found to be significant mean difference between urban girls and rural girls \((t=4.27, \text{df}=98, P<.01)\), urban girls and rural girls \((t=6.33, \text{df}=98, P<.01)\), and rural girls and tribal girls \((t=2.75, \text{df}=98, P<.01)\). The urban girls \((M=181.50)\) possess more favourable attitude than rural girls \((M=171.50)\) and tribal girls \((M=164.64)\) while rural girls are superior than tribal girls in their attitude on EHAS.

Therefore it can be concluded that the hypothesis fourth is partially supported.

Among Teachers

5. The performance of teachers come under the category of favourable attitude, i.e. 81.25% teachers possess positive attitude, 15.42% possess neutral attitude while 3.33% teachers possess moderately low attitude towards EH to education, and support the hypothesis fifth to be retained.

6. The female teachers’ mean \((M=174.20)\) is higher than male teachers \((M=171.92)\), but the mean difference was found to be insignificant \((C.R.=1.39, \text{df}=238)\). Both the male and female teachers possess the same EH attitude, and support the hypothesis sixth to be retained.

7. The attitude of urban teachers \((M=180.25)\) is significantly
higher than the rural teachers (M=173.68) and tribal teachers (M=165.25). The three groups differ significantly on EHAS (F=7.07, df=2.237, P<.01 level). To verify the significant difference 't' was calculated. The urban and rural teachers' (t=3.93, df=158, P<.01), urban and tribal teachers' (t=9.93, df=158, P<.01) and rural and tribal teachers' (t=4.70, df=158, P<.01) groups differ significantly as regard to their attitude on EHAS and does not support the hypothesis seventh.

8. All the six groups differ significantly on EHAS (F=11.03, df=5.234, P<.01). To verify the significant mean difference of different groups of teachers, 't' was calculated the findings were:

(a) The 't'-ratio between urban male (M=177.80) and female teachers (M=182.70) was found to be insignificant (t=1.98, df=78), rural male (M=173.35) and female teachers (M=174.00) was found to be insignificant (t=0.24, df=78), and tribal male (M=164.65) and female teachers (M=165.85) was found to be insignificant (t=0.46, df=78) in respect of their attitude on EHAS.

(b) There is no significant difference between urban male teachers and rural female teachers (t=1.72, df=78), while urban male teachers and tribal male teachers (t=5.02, df=78, P<.01) and rural male teachers and tribal male teachers (t=3.14, df=78, P<.01) differ significantly in their attitude towards EH to education.

(c) The urban female teachers and rural female teachers (t=3.43, df=78, P<.01), urban female teachers and tribal female teachers (t=6.84, df=78, P<.01) and the rural female
teachers and tribal female teachers \( t=3.24, df=78, P<.01 \) differ significantly with regard to their attitude on EHAS. The urban female teachers \( (M=182.75) \) scored higher as compared to rural female teachers \( (M=174.00) \) and tribal female teachers \( (M=165.85) \).

Therefore it can be concluded that the hypothesis eighth is partially supported.

9. There is no significant difference between the mean scores of students \( (M=171.92) \) and teachers \( (M=173.06) \) in their attitude towards EH to education on EHAS \((C.R.=0.92, df=538)\) and support the hypothesis nineth to be retained.

In order to measure the effect of sex and area on attitude for each hazard the 2x3 factorial design was adopted and two way ANOVA was calculated.

10. (i) It is evident from Table 4.34 that sex have insignificant \((F=1.23, df=1,294)\) influence on attitude of students towards surroundings of the institution hazard.

(ii) The F-value for area is significant \((F=140.85, df=2,294, P<.01)\). To test the significant difference \( 't' \) was calculated. The \( 't' \) values for students of urban-rural 12.40, urban-tribal 13.76 and rural-tribal 3.30 are significant statistically at .01 level of significance for 198 degrees of freedom, where as the F-ratio for interactional effect of sex and area is found to be insignificant \((F=3.73, df=2,294)\).

(iii) The F-value 2.56 for sex have insignificant \((Table 4.36)\) influence on attitude of teachers towards surroundings of the institution hazard.
(iv) The F-value for area is significant (85.61, df=2,234, P<.01). The 't' values for teachers of urban-rural 9.00, urban-tribal 12.21 and rural-tribal 3.29 are significant statistically at .01 level of significance for 158 df, where as the F-ratio for interaction effect of sex and area is found to be insignificant (F=3.02, df=2,234).

(v) The 't' value of students' - teachers' attitude on surroundings of the institution hazard is found to be insignificant (t=0.28, df=538).

11. (i) The F-value for students sex attitude on physical facilities hazard is found to be insignificant (F=0.51, df=1,294).

(ii) The F-value for area is significant(F=173.74, df=2,294,P<0.01). The 't' values for students of urban-rural 9.42, urban-tribal 16.33 and rural-tribal 7.61 are significant at .01 level of significance for 198 degrees of freedom. The F-ratio for the joint effect of sex and area is 1.26, df= 2.294 which is insignificant (Table 4.39).

(iii) The sex have insignificant (F=.047, df=1,234) influence on physical facilities hazard attitude of teachers (Table 4.41).

(iv) The F-value for area is significant (F= 184.59, df=2,234,P<.01) on attitude of teachers. The 't' values for urban-rural 12.33 (P<.01), urban-tribal 15.19 (P<.01) and rural-tribal 2.27 (P<.05) are significant. The F-ratio for joint effect of sex and area is 3.63, df=2,234, which is insignificant(Table 4.42).

(v) The 't' value for students' and teachers' attitude on
physical facilities hazard is found to be insignificant (t=1.80, df=538).

12. (i) The sex have insignificant (F=3.22, df=1,294) influence on television attitude of students.
(ii) For area F-shows significant value (F=236.73, df=2,294, P<.01). The 't' values for students of urban-rural 3.33, urban-tribal 6.14 and rural-tribal 7.58 are significant at .01 level of significance. The F-ratio for the joint effect of sex and area is 1.79, df=2,294, which is insignificant.
(iii) The F-value for sex is insignificant (F=1.44, df=1,234) on television attitude of teachers.
(iv) While for area is significant (F=309.27, df=2,234). The interaction between sex and area does not produce any significant (F=1.84,df= 2,234) effect on teachers' attitude regarding television hazard (Table 4.46). The 't' values for urban and rural (t=5.25), urban and tribal (t=19.41) and rural and tribal (t=13.12) are found to be significant at .01 level for degrees of freedom 158 (Table 4.47).
(v) There is no significant difference in the attitude towards television hazard between students and teachers (t=0.28, df=538).

13. (i) The F-value (Table 4.49) for sex (F=1.93, df=1,294) and for interaction between sex and area (F=0.78,df=2,294) is found to be insignificant towards over crowded classes hazard of students.
(ii) while area produce significant (F=343.61, df=2,294, P<0.01) effect on students' attitude and the t-values are statistically significant between urban-rural (t=22.65)
urban-tribal (t=31.443) and rural-tribal (t=6.22) at .01 level of significant for 198 degrees of freedom (Table 4.50).

(iii) It is evident from Table 4.51 that sex have insignificant ( F=0.71, df=1,234) influence towards over crowded classes, the joint effect of sex and area also have insignificant influence on teachers' attitude towards over crowded classes.

(iv) While F-value 383.72 for area is significant (Table 4.51), to test the significance of difference 't' was calculated which indicates that urban-rural (t=25.98), urban-tribal (t=30.07) and rural-tribal (4.43} differ significantly at .01 level of significance for 158 degrees of freedom (Table 4.52).

(v) The 't' ratio between students and teachers was insignificant towards over crowded classes hazard (t=1.50,df=538).

14. (i) The F-value for sex (F=0.12, df=1,294) and for joint effect of sex and area (F=1.86,df=2,294) have been found insignificant on students' attitude.

(ii) While the F-value for area is significant (F=38.34, df=2,294) on students' attitude towards politics and political power hazard (Table 4.54). The 't' values for urban and rural (t=7.23,df=198, p<.01) and urban and tribal(t=6.31, df=198, p<.01) are found to be significant while rural and tribal (t=1.32) do not differ significant towards politics and political power hazard (Table 4.55).

(iii) Male and female teachers do not differ significantly (F=0.64, df=1,234), and the interaction between sex and area
together do not have any significant effect on teachers attitude towards politics and political power hazard.

(iv) While the F-value for area is significant (F=61.05, df=2,234, p<.01) (Table 4.56). It indicates that urban-rural (t=6.73), urban-tribal (t=9.76) and rural-tribal (t=3.42) teachers differ significantly at 0.01 level of confidence and for 158 degrees of freedom (Table 4.57).

(v) Both students and teachers expressed similar types of attitude (t=.03, df=538, p<.01) towards politics and political power hazard.

15. (i) Boys and girls do not differ significantly (F=1.92, df=1,294) and the interaction between sex and area together do not have any significant (F=2.49, df=2,294) influence on students' attitude towards teaching methods hazard (Table 4.59).

(ii) The F-value for area is significant (F=251.02, df=2,294, p<.01). The 't' values for students of urban-rural (t=13.90), urban-tribal (t=20.67) and rural-tribal (t=6.10) are significant (Table 4.60) at 0.01 level of confidence for 198 degrees of freedom.

(iii) Male and Female teachers do not differ significantly (F=2.11, df=1,234) and the interaction between sex and area together do not have any significant (F=0.14, df=2,234) influence on teachers' attitude towards teaching methods hazard (Table 4.61) while attitude of different groups of different areas differ significantly (F=310.24, df=2,234, p<.01). The 't' values between urban-rural (t=18.22), urban-tribal (t=28.34) and rural-tribal (t=5.29) are significant at
0.01 level of confidence for 158 degrees of freedom (Table 4.62).

(v) Students and teachers do not differ significantly on their attitude towards teaching methods hazard \((t=0.82, df=538, P<.01)\). (Table 4.63).

5.4 CONCLUSIONS

The most significant conclusions about EHAS and different hazards of Higher Secondary students and teachers drawn above can be summarized as below:

(i) Students and teachers come under high favourable category, 78.67% students and 81.25% teachers have high positive attitude on EHAS. The high level of awareness among students and teachers towards EHAS come out to be very good i.e. both of them have good knowledge about hazards.

(ii) The attitude of the girls and female teachers is slightly better than the attitude of boys and male teachers as mean difference between their attitude is not statistically significant, the difference between the mean is due to a chance factor.

(iii) The urban students and teachers have better attitude in comparison to their counterparts residing in rural and tribal areas. Urban students and teachers have higher level of awareness. The performance of rural students and teachers is better than tribal students and teachers on EHAS.

(iv) Those who belong to a particular area and their culture is similar have shown equal level of performance on EHAS.

(v) Most of the urban students and teachers seem to be more
sensitive in their attitudes about television and overcrowded classes. Rural students and teachers have shown most favourableness for television, physical facilities and teaching methods while most awareness of tribal students and teachers is found to be about physical facilities and teaching methods respectively.

(vi) Sex has no impact independently or jointly with area and the attitude of students and teachers about different hazards, whereas area has functioned significantly for each hazard, except rural and tribal boys who have equal level of performance for politics and political power hazard towards education.

5.5 SUGGESTIONS

Education should be related to its environment. From the environment, education takes both the means and the cult, but it does not mean that the demerits of the environment be also included in the education. One of the responsibilities of education is to make the pupils and the concerned conscious enough to discard the evils and to make good the deficits. Education in our times has been ill permeated by politics, population, superstitions, demoralized pioneering. Hence they often come up as the environmental hazards, to keep them away from the environment the administrators, the principals, the teachers and the students are all responsible for the inbuilt exaltations in academic fields and educational values.

The findings of the present study stress upon
the following suggestions.

FOR ADMINISTRATORS

(1) In rural and tribal schools it is best if the teacher belongs to the same region.

(2) Every school should have an adequate number of teachers (subjectwise) especially in rural and tribal areas.

(3) Schools should be located in healthy environment and away from all noise and disturbances of the surroundings.

(4) The school complex should be formed for better teaching and should run educational programmes with the help of expert teachers and aware students and teachers for those educational hazards, which have been hindering the all round development of child.

(5) Administrators should get in touch the parents and community regarding school problems and should be sensitive resourceful and help them to come over such problems if brought into his light.

(6) Teachers should not flee from rural and tribal areas, full facilities should be provided to them to stay and work with full confidence.

(7) It is very necessary to provide physical facilities especially in rural and tribal areas.

(8) DIET's should circulate a magazine or brochure that initiates teachers of Higher Secondary Schools towards removing inertness, in keeping away hazards from education.

(9) Student's unions should not be allowed to take the form of political parties. They must work only as literacy
organisations. Politics in every form must be kept out of schools. No one should be allowed to take part in politics.
(10) Effective and suitable guidance programmes have to be organised at the right time in order to lessen the educational hazards.
(11) The libraries should serve as intellectual workshops. The libraries should be re-oriented according to the needs and tastes of the readers. They should be properly organised and should remain open on holidays.
(12) The size of the class—at least for the purpose of all round development of the child, the number of students in the class should be brought within a reasonable limit.
(13) Refresher courses should be organised at frequent intervals to keep teachers in constant touch with the latest knowledge and skills.
(14) It is necessary for rural and tribal areas that more and more interactional approaches are incorporated into teaching methods to make teaching more dynamic and effective because a curricular programme can be brought into operation only through appropriate methods of teaching.

FOR PRINCIPALS
(1) He should give top priority by providing a healthy external environment, the light of the sun, clear air and open space to children.
(2) The institution should be provided facilities to study books, magazine and other standard literature in Hindi.
(3) Film shows should be arranged in the school from time to
time and attendance of pupils be made compulsory there in. This will keep them away from harmful film shows and serials.

(4) Over crowding in classes must be avoided and pupil-teacher ratio must be reduced at all costs, especially in urban areas.

(5) The tendency towards political groupism in educational institutions must be checked.

(6) The system of private coaching or tuition must be stopped.

(7) Principal should have an ample knowledge of sophisticated methods, techniques, innovations and new approaches of teaching so that he should be able to guide his subordinates for better and effective teaching.

(8) Books concerning the teaching profession should also be bought in order to acquaint the teachers with the modern techniques, teaching aids and devices.

(9) The inadequacy of physical facilities can be removed mutually by the community.

(10) He should not check teachers from attending seminar, workshops or orientation courses and keep themselves well informed of the latest changes in educational sphere.

(11) Efforts should be made to make students and teachers aware towards EII to education therefore the best form of educational development can become possible.

FOR TEACHERS

(1) Talented teachers should help in improving the atmosphere in schools.

(2) All children should have equal educational opportunities
and students should get every opportunity for intellectual activity.

(3) Teachers should not be active participants in politics while political organisations of students should be restrained.

(4) Providing the feeling of social affiliation and national integrity to the children through books and films could also be a helpful measure towards the remedial activities for removing educational hazards.

(5) Students should be given an awareness of the realities of life, creating awareness of hygiene, cleanliness, population control etc.

(6) All audio-visual aids of teaching different subjects available in the schools must be appropriately used as and when needed and the schools lacking in it must either purchase or get on loan from other institutions.

(7) Teachers must evaluate aspects of their own teaching style, understand the dynamics of their classroom and increase their own awareness for those factors which are influencing the quality of learning experience of students.

FOR STUDENTS

(1) The students should be thoughtful for the future progress and prosperity of the society and the nation.

(2) The students should take part in games, sports, social services, literacy and cultural programmes. In this way their extra energy can be utilized.

(3) They should help the teachers in constructing the
improvised apparatus and other aids to enrich their class teaching.

(4) They should not spend long hours in viewing the television programmes and do not neglect their studies, only they have to view the selected programmes.

(5) The students should not participate in politics. They may show their interest but in a peaceful manner.

In the end I would like to say that to develop awareness about different hazards and minimize their impact on attitude of secondary schools students and teachers it is not only their responsibility but also of the administrator, principal, parents and the community, in general. Parent teacher associations must be formed especially for this purpose and suitable changes should be done in curriculum for teacher training to incorporate improved techniques of teaching and learning.

5.6 THE FOLLOW-UP STUDIES

There is plenty of scope for further research in this particular direction. On the basis of findings of present study, some of the following studies are recommended to be carried out-

(1) This type of research work can be extended to the entire state or country at large.

(2) It can be administered to the lower or upper age group students.

(3) Impact of educational hazards upon the physical, mental,
academic achievement and development of the children of various age level may be taken.

(4) Study may be replicated on a large sample of urban, rural and tribal areas.

(5) To find out the relationship between attitude of educational hazards and achievement of secondary school students.

(6) To study the impact of different educational hazards on teaching efficiency.

(7) To find out the relationship with some important environmental factors viz. socio-economic status, pollution, mass-media, population-explosion etc.

(8) The study on adjustment and awareness towards Environmental Hazards of Education.