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ADJUSTMENT OF HEARING-IMPAIRED STUDENTS IN SPECIAL SCHOOLS OF PURVANCHAL REGION OF UTTAR PRADESH

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ABSTRACT

Adjustment leads to a continuous interaction between the individuals needs and the environmental constraints in the setting in which the needs are to be fulfilled. It is a continuous process by which an individual varies his behaviour to produce a more harmonious relationship between himself and his environment. The significance of adjustment in the overall development of an individual is in general and its even greater significance in case of Special Need Children (SNC). The present study is based on descriptive-survey method. The investigator has taken purposively 203 Hearing-Impaired students studying in six different special schools selected from Purvanchal region of Uttar Pradesh. For collection of data, the investigator has used self-developed 'Adjustment Inventory of Hearing-impaired students'; t-test and F-test were used for analysis and interpretation of data. The main findings of the study are: (a) There exists significant difference in Adjustment between/among different sub-groups of Hearing-Impaired students formed on basis of : (i) Gender, (ii) Class, (iv) Perception about Facilitation for Hearing-impairment; while (b) There exists no significant difference in Adjustment between/among different subgroups of Hearing-Impaired students formed on basis of :(iii) Type of Disability.

KEYWORDS: Adjustment, Hearing-Impaired Students

INTRODUCTION

Origin of Research Problem

All individuals seek to fulfill their basic needs in their own physical and social context in accordance to their will and their potentials. However, there are also several kinds of environmental constraints in the fulfillment of the needs. This leads to a continuous interaction between the individuals needs and the environmental constraints in the setting in which the needs are to be fulfilled. The interaction leads to an initial effort on part of the individual to modify their behavior in accordance to the situational demands (Good,1959) with an aim to maintain a balance between the needs and the environmental situations (Shaffer,1961). The modification of behavior leading to an equilibrium between the individual needs and the environmental or situational demands is an instance of desirable adjustment (Monroe,1990). Adjustment of an individual is therefore considered to be adequate to the extent to which the individual is able to establish a balanced relationship between their needs and the environmental constraints including physical, social and emotional constraints in the satisfaction of those needs (Crow and Crow, 1956). Adjustment is thus a broad concept that relates to how well a person manages the various demands experienced in a particular setting. It is a continuous process by which an individual varies his behavior to produce a more harmonious relationship between himself and his environment.

Every individual is expected to develop the skills of adjusting themselves in terms of their behavior, feelings and

dispositions to reach a balance with different situational demands that they encounter in different spheres of their life. The ability of adjustment is necessary for the individual to lead a balanced and satisfying life that is personally satisfying, socially acceptable and economically productive. Therefore, one of the goals of education is to help individuals develop among them the capacity to adjust themselves with their environment where environment broadly includes the psycho-social as well as physical environment. Adjustment is highlighted as a goal of education on the ground that our environment is ever-changing and an individual is ought to maintain a balance and harmony with the environment and that the skill to develop such ability can be learned.

However, studies related to adjustment reveal that individuals have adjustment problems and the problem has been attributed to several factors (Raju & Rahmatullah, 2007; Deka, 2004; Asthana, 1986; Bala & Rao, 1986;). The problem is even more serious in case of special need children (SNC) (Bala & Rao, 1986; Deka, 2004). Special need children is defined as "The child who deviates from the average or normal child in mental, physical or social characteristics to such an extent that he or she requires a modification of school practices or special educational services, in order to develop, to his maximum capacity (Kirk & Gallagher, 1972 mentioned in Encyclopedia of Special Education).".

The lack of one or more physical functioning among such children is in itself a major source of mal-adjustment since some of their needs-social or psychological, remain ungratified leading to decrease in capacity to adapt to their environment (Shaffer, 1961). Further, adjustment problems of SNC are manifested at school and at home in several ways such as- their classroom behavior, low self concept, high anxiety, low achievement, poor relationship with parents, teachers and peers, poor level of communication, etc.

The significance of adjustment in the overall development of an individual in general and its even greater significance in case of SNC has made it a relevant topic for research among the community of researchers. The SNC can be categorized into different categories depending upon the impairment of their sensory capacity. SNC with hearing impairment is one such category that is typically a case of adjustment problem (Lata, K., 1991; Bala & Rao, 1986). Communication is an essential component of an individual's overall adjustment mechanism. Since, this essential component is not in a state of normal functioning among the hearing-impaired students, it poses a great threat to their adjustment capacity. Therefore, it was considered important to study the adjustment of hearing-impaired students.

Assessing the adjustment of SNC and for that matter of hearing-impaired students is an ongoing process. It has to be done on a continual basis and in different contexts. The issue is of even greater significance in light of recent developments wherein the educational policies are oriented towards integration of SNC in normal classroom settings. The first attempt of implementation of integration by the Ministry of Education and Royal Commonwealth Society of Blind was known as "Palampur experiment a partial integration"; this integration means for 'the integration of blind with normal students' and its results was sound and; findings revealed that there is significant progress in blind students (Chauhan, 1989) (Six Educational Survey (NCERT, 1998; P243)). To what extent they will be able to adjust in an integrated setting is an important question for speculation. There is, therefore, a justified need of comparative studies of adjustment in different settings. However, even more important is the assessment of such students in the special schools where the environment is deliberately made more conducive to their development. Assessing the student adjustment in such a setting will provide invaluable data that will be available for further educational decisions as well as for speculation regarding their adjustment in an integrated setting. The study was conceptualized to assess the adjustment of hearing-impaired students. Consequently, the descriptive research also explored the demographic factors that possibly influence the adjustment of the

hearing- impaired students. Thus, the study was completed with the following objectives in mind:

Objective 1: To assess the level of adjustment of Hearing-Impaired students.

Objective 2: To explore the differences in adjustment of Hearing-Impaired students on basis of demographic variables.

The following null hypothesis was framed to meet the objectives of the study:

There exists no significant difference in Adjustment between/among different subgroups of Hearing-Impaired students formed on basis of demographic variables:

- For Gender; $\mathbf{H_{01}}$ **:** Mean $_{\text{Male}}$ = Mean $_{\text{Female}}$
- For Class; $\mathbf{H_{02}}$ **:** $\text{Mean}_{\text{Class6}} = \text{Mean}_{\text{Class7}} = \text{Mean}_{\text{Class8}}$
- For Type of Disability; $\mathbf{H_{03}}$**:** Mean $_{\text{Hard-of-Hearing}}$ = Mean $_{\text{Deaf}}$ = Mean $_{\text{Hard-of-Hearing-with-other-Disabilities}}$ = Mean $_{\text{Deaf-with-other-Disabilities}}$)
- For Perception about Facilitation for Hearing-impairment; $\mathbf{H_{04}}$ **:** Mean $_{\text{Very Good}}$ = Mean $_{\text{Good}}$ = Mean $_{\text{Bad}}$

OPERATIONALIZING THE KEY TERMS

Hearing-Impairment

According to PWD Act (1995); hearing impairment means loss of sixty decibels or more in the better ear in the conversational range of frequencies. Hearing impairment is a generic term including both deaf and hard of hearing which refers to persons with any type or degree of hearing loss that causes difficulty working in a traditional way. For the present study, hearing impairment is defined as "An Overall term that includes all levels of hearing loss, both deaf and hard of hearing".

Students

Student is defined as the hearing-impaired students including both deaf and hard of hearing from class VI-VIII enrolled in different special schools of Purvanchal region of Uttar Pradesh during the session 2014-15.

Adjustment

According to Ark off (1968); adjustment is the interaction between a person and his environment. How one adjusts in a particular situation depends upon one's personal characteristics as also the circumstances. According to Baker & Siryk (1984); adjustment is the behavioural process of balancing conflicting needs, or needs against obstacles present in the environment. In the present study, the term adjustment refers to the extent to which the hearing-impaired students from different classes at elementary level in special schools perceive their behaviour as a balanced behaviour in different contexts such as social, emotional and academic contexts operational zed through various relevant items in a self- constructed questionnaire.

Type of Disability

In the present study, Deaf (Unable to usefully perceive sounds in the environment with or without the use of a hearing-aid; unable to use hearing as the primary way to gain information), Hard of Hearing (Having sufficient residual

hearing to be able, with a hearing aid, to comprehend other's speech and oral communication) and multiple disabilities (deaf and hard of hearing with other physical disabilities, eg. Visual, physical, learning problems)

Facilitation for Hearing-impairment

This means for 'is school providing necessary facilitation for all hearing-impaired students of the school or there is unsystematic distribution.'

METHODOLOGY OF THE STUDY

The study was completed within a quantitative research paradigm which is also popularly termed as the positivist research paradigm. Quantitative research paradigm is based on the assumption of *determinism* according to which events or phenomena have multiple causes (Grunbacum & Salmon, 1988). The assumption of objectivity states that a considerable agreement could be achieved over the causes of the event or phenomena and its characteristics among different observers. A third assumption is the assumption of probabilistic statements that can be made regarding the causes (Bedau & Humphreys, 2008) and are generally stated during research in form of hypothesis. It is on the basis of these probabilistic statements regarding the status and/or causes of events or phenomena that the researchers arrive at "probabilistic predictions and generalizations" (Johnson & Christensen, 2004). Further, all these probabilistic statements (hypothesis) are framed and tested under the assumption of objectivity.

The focus of the study was on assessment of adjustment of hearing-impaired students in their academic setting, where the special schools in Purvanchal region of Uttar Pradesh was the specific academic context in which the study was completed. Thus, measurement of the concerned variable in an objective way followed by ascertaining of the probabilistic statement regarding the status of adjustment in an objective way was the primary objective of the study. Consequently the positivist research paradigm was appropriate for the study.

Method

In order to achieve, the objectives of the study within positivist paradigm, a descriptive survey method was used in the present study.

Population of the Study

The Hearing-Impaired students from classes VI-VIII (during session 2014-15) studying in special schools of Purvanchal Region in Uttar Pradesh comprised the population for the present study.

Sample

Keeping in mind, the finances and resources, Purvanchal Region of Uttar Pradesh was randomly selected among four regions recognized by the Election Commission of India for the purpose of General Poll. All Hearing-Impaired students studying in classes VI-VIII of Special schools in Purvanchal region of Uttar Pradesh were selected as sample through Purposive sampling technique. There were only six schools approved by RCI, Social Welfare Ministry, BSA and Jila Viklang Adhikari for Session 2014-2015 in Purvanchal Region of Uttar Pradesh. For 2014-15 sessions, 259 Hearing-Impaired students were enrolled. The investigator had collected data from 226 H. I. students. One student had filled the tools incompletely while 22 H. I. students were identified as outliers in the study because they lie out of Normal Probability Curve (i.e. lies out of range from + 3sigma to -3sigma). Therefore, 203 Hearing-Impaired students were finally

selected for the study.

Instrument

A 24-items self-constructed *Adjustment Inventory for Hearing-Impaired Students* was used for collecting data on students' adjustment. The items for the inventory were empirically developed based on face to face interview with a small sample of 20 hearing-impaired students from two different schools. The problems identified from the students interview was the basis for writing items for the inventory. The content validity of the tool was further established by incorporating changes and modifying the items on basis of expert's opinions of the field of Education, Psychology and Special Education. The reliability coefficient for the inventory was found to be 0.54 (Kuder-Richerdson, KR-20).

Techniques of Data Analysis

Simple descriptive statistics were used to report the adjustment of hearing-impaired students. The t-test and F-test were used for comparison of adjustment between and among the different groups of HI students. Since t-test and F-test are based on the assumptions of normalcy of data distribution, therefore, the normalcy of data was checked using Chi-square test (i.e. Goodness of Fit test). Chi-square value was found to be 9.25 for df=7 (Critical value for df=7 is 14.067). The normal probability plane is divided into eight categories having equal distance (i.e. 0.75 sigma) with reference to their mean (see appendix-1). Because, Chi-square value was smaller than critical value; therefore, the data was assumed to be normal i.e. data are normally distributed (see appendix-2), and use of t-test and F-test were justified.

RESULTS

The results are presented as per the objectives of the study.

Objective 1:

The summary of statistics pertaining to the first objective as obtained from the analysis of data on the adjustment scale is presented in Table 1 below.

Table 1: Mean, SD and SE_M of Hearing-Impaired Students on Adjustment

Variable	Mean	SD	SE_M
Adjustment (N=203)	**12.40**	**3.20**	**0.22**

Table 1 presents the mean, standard deviation and standard error of mean for the scores of hearing- impaired students obtained from the adjustment scale. The mean score of the hearing- impaired students on adjustment scale is 12.40 and SD of 3.20. The mean score falls on the 50 percentile (**P_{50}** i.e. 12.00). Because, data on adjustment scale are normally distributed; then, mean and P_{50} were same and taken as norm. For hearing-impaired students, population mean (**Mean± SE_M**) of adjustment lies between 12.18 to 12.62. On the basis of Mean and SD; the following categories were identified among hearing-impaired students on adjustment scores, given in Table 2:

Table 2: Different Levels Adjustment of Hearing-Impaired Students

S. N.	Categories	Levels of Adjustment	Frequency (f)	Percentage (%)
1.	(Mean+2SD) to (Mean+3SD)	High	8	3.94
2.	(Mean+1SD) to (Mean+2SD)	Above Average	27	13.30

Table 2: Contd.,

3.	(Mean-1SD) to (Mean+1SD)	Average	125	61.57
4.	(Mean-2SD) to (Mean-1SD)	Below Average	38	18.72
5.	(Mean-3SD) to (Mean-2SD)	Low	5	2.46

From the table-2, it is found that 61.57% of Hearing-Impaired Students have Average level of Adjustment. But, broadly 82.75 % among hearing-impaired students exhibit average to low adjustment. It is therefore interpreted that the hearing-impaired students have adjustment problems.

Objective 2:

The results of data analysis pertaining to comparison between different groups are summarized in Table 3 below.

Table 3: Mean, SD and Inferential Statistic Value for DIFFERENT Subgroups

S. N.	Demographic Variables	Groups	N	M	SD	df	t-value/F-value	H0 Checked	Decision about H0
1.	Gender	Male	135	11.99	2.96	201	2.78**	H_{01}	R
		Female	68	13.21	3.51				
2.	Class	VI	65	10.83	2.43	2, 200	17.08**	H_{02}	R
		VII	64	12.39	3.19				
		VIII	74	13.78	3.21				
3.	Type of Disability	Deaf	112	12.30	2.82	3, 199	1.63	H_{03}	NR
		HOH	30	13.53	3.43				
		Deaf with OD	49	12.08	3.64				
		HOH with OD	12	11.75	3.82				
4.	Necessary facilitation for Hearing-impairment	Very Good	65	13.06	3.31	2, 200	14.70*	H_{04}	R
		Good	43	13.98	2.79				
		Bad	95	11.23	2.87				

(*significant at 0.05 level)

The analysis as presented in Table 3 shows that the hearing-impaired students differed in their adjustment scores with respect to the demographic variables gender, class and facilitation for Hearing-impairment and their corresponding null hypotheses **H_{01}, H_{02}, H_{04}** were therefore rejected. No difference was observed in the mean of adjustment scores of hearing-impaired students with respect to type of disability and hence, the corresponding null hypotheses **H_{03}** were not rejected.

The mean of adjustment scores of hearing-impaired students are presented in descending order related to corresponding null hypotheses rejected or not rejected, as:

- **For H_{01}:** $\text{Mean}_{\text{Male}} = \text{Mean}_{\text{Female}}$

H_{01} was rejected due to significant t-value (t= 2.78; df=201) at 0.05 level of significance. Further, **$\text{Mean}_{\text{Girl}} > \text{Mean}_{\text{Boy}}$**

- **For H_{02}:** $\text{Mean}_{\text{Class6}} = \text{Mean}_{\text{Class7}} = \text{Mean}_{\text{Class8}}$

H_{02} was rejected due to significant F-value (F=17.08; df=2, 200) at 0.05 level of significance.

The calculated t-values to find out the difference in mean scores of adjustment of hearing-impaired students of Class-6, Class-7 and Class-8 are 5.69 (between Class-6 and Class-7), 5.41 (between Class-7 and Class-8) and 11.57 (between Class-6 and Class-8) respectively. The table values at 0.01 and 0.05 level of significance with df=2, 200 is 2.35 and 1.97 respectively.)

Further, $\mathbf{Mean_{Class-8} > Mean_{Class-7} > Mean_{Class-6}}$

- **For H_{03}:** Mean $_{\text{Hard-of-Hearing}}$ = Mean $_{\text{Deaf}}$ = Mean $_{\text{Hard-of-Hearing-with-other-Disabilities}}$ = Mean $_{\text{Deaf-with-other-Disabilities}}$

H_{03} was not rejected due to insignificant F-value (F=1.63; df=3, 199) at 0.05 level of significance.

Further, on the basis mean scores, **Mean $_{\text{Hard-of-Hearing}}$ > Mean $_{\text{Deaf}}$ > Mean $_{\text{Deaf-with-other-Disabilities}}$ > Mean $_{\text{Hard-of-Hearing-with-other-Disabilities}}$**

- **For H_{04}:** Mean $_{\text{Very Good}}$ = Mean $_{\text{Good}}$ = Mean $_{\text{Bad}}$

H_{04} was rejected due to significant F-value (F=14.70; df=2, 200) at 0.05 level of significance.

The calculated t-values to find out the difference in mean scores of adjustment of hearing-impaired students receiving minimum facilities prescribed for hearing-impaired students in terms of status Very good, Good and Bad are 2.63 (between Very good and Good), 9.01 (between Good and Bad) and 7.83 (between Very Good and Bad) respectively . The table values at 0.01 and 0.05 level of significance with df=201 is 2.35 and 1.97 respectively.)

Further, **Mean $_{\text{Good}}$ > Mean $_{\text{Very good}}$ > Mean $_{\text{Bad}}$**

(See appendix-3 for figural details related to objective-2)

Summary of Findings:

Table 4

Objective	Finding
Assessment of Adjustment of HI students	• The adjustment of Hearing-Impaired Students was found to be average but broadly the student's adjustment was average to low.
	• Gender has an influence on the adjustment of hearing-impaired students. Female students were found to be significantly more adjusted than the male students (Bala & Rao, 1986). • Adjustment varies with the student's class and hence age (Mussel man et al., 1996). • Adjustment is not influenced by degree of impairment (Batten et al., 2014). • Adjustment is influenced by the extent to which perception of facilitation are provided to the students. Students regularly satisfied with facilitation were found to have a greater mean on adjustment scale that those who are perceived facilitation as good or bad (Bala & Rao, 1986).

DISCUSSIONS

Adjustment has been studied in the past to be a problem for SNC. The findings of the present study corroborates with the findings of previous studies thus reflecting the global nature of the problem cutting across boundaries. The adjustment inventory included items drawn from the areas of social, emotional and academic adjustment. Thus, the hearing impaired students sampled in the present study were found to be having adjustment problem. Indirectly, it can be inferred that they had problems in their social, emotional and academic adjustment. Developing well adjusted individuals and for that matter well adjusted SNC is one of the significant goals education. The findings of the present study and those from the previous studies clearly indicates a lacuna in the educational efforts to help the SNC and hence the HI students to develop into well adjusted personality. The lacuna has further far reaching consequences. The recent declarations at the national and international forums to involve one and all including the SN people into national development will consequently get hampered if the SNC as well as HI students are not helped to improve their adjustment. It is adjustment in any sphere of life social or emotional will surely inhibit the full manifestation of their potential and will thus get them deprived from contributing to the national and societal development. There are several factors that influence the adjustment of the HI student and all these factors need to be taken into consideration while chalking out any plan to help them develop into well adjusted personality. Parents, teachers, schools, society and the government need to work in a co-ordinate way to ensure that they emerge well adjusted in the due course of time.

Certain of the demographic variables were found to be significantly influencing the adjustment of the hearing-impaired students. Gender, Age and facilitation of hearing-impairment were found to be significantly influencing the adjustment of the hearing-impaired students. Female were found to be more adjusted than their male counterparts.

Age was another important factor. Although the adjustment increased with age it was still below average. It clearly indicates that there is need to add educational inputs that can accelerate the adjustment process among the hearing impaired students. We cannot leave them as such to develop their adjustment skills with maturity.

The influence of facilitation for hearing-impairment is too obvious. The facilitation compensates for their impairment and as such it helps the HI students to better communicate with their environment and subsequently adjust with the changing environment. At least the hard to hearing students' adjustment can be ensured by ensuring regular distribution of hearing aids and training them in its use.

EDUCATIONAL IMPLICATIONS OF THE STUDY

- It was found in Census 2011 that approximately 19% are hearing-impaired people (increasing with 2.4 % per year) among total disabled population. The low level of adjustment among HI students reflects the necessity of school and family level initiatives to check for the loopholes and ensure the development of adjustment skills among the students
- Study reveals that school provision for providing necessary hearing aids has better impact on adjustment. Therefore, it is suggested to policy maker that they ensure providing necessary equipments to each and every hearing-impaired students.
- In early stage of data analysis, it was found that parents are not aware to sign language which is necessary to understand the basic behavior and problems of hearing-students. The basic problem of hearing-students is that

they are not able to communicate their problem to people of their surroundings. Therefore, it is recommended that each special school must organize the basic sign language workshop for the parents of hearing-impaired students on regular basis.

CONCLUSIONS

Hearing-impaired students constitute a significant proportion of the overall population of SNC. As such their development into a well -adjusted personality is a matter of prime concern, the poor adjustment of HI students reported repeatedly through this study and past studies clearly indicate towards a need of concerted effort on part of schools, parents, teachers and government policies to ensure that their development of adjustment skills among the hearing impaired students. There is need of further research into the process as to how the female HI students are more adjustment than their male counterpart that surely will illuminate the efforts the improve the adjustment of HI students as a whole. The demographic variables such as age, gender and sign language proficiency of parents and teachers are important in adjustment of HI students. Consequently, there is further need to assess the reasons for the gender differences in adjustment and subsequently devise plans for their betterment. Awareness program and workshops for parents and teachers with respect to sign language is essential so that the HI can better communicate and hence better adjust with their environment.

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APPENDICES

Appendix-1: (Related to Goodness of Fit test)

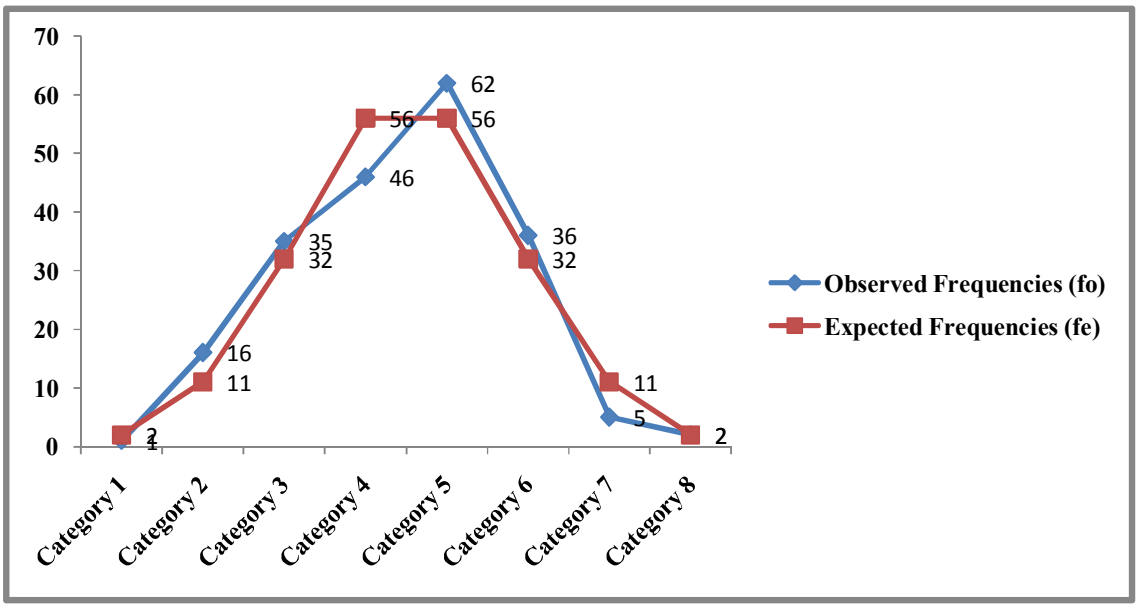
Table of Obtained and Expected frequency distribution of test scores of Adjustment of Hearing-Impaired Students

S. N.	Categories	Observed Frequencies (f_o)	Expected Frequencies (f_e)	Chi-Square Value = $\sum(f_o-f_e)^2/fe$
1.	Category 1	1	2	0.5
2.	Category 2	16	11	2.27
3.	Category 3	35	32	0.28
4.	Category 4	46	56	1.79
5.	Category 5	62	56	0.64
6.	Category 6	36	32	0.5
7.	Category 7	5	11	3.27
8.	Category 8	2	2	0
Total		203	App. 203	Chi-Square Value = 9.25

(for df=7; Critical Value of Chi-Square is 14.067)

Appendix-2: (Related to Goodness of Fit test)

Frequency polygon showing Obtained and Expected frequency distribution of test scores of Adjustment of Hearing-Impaired Students



Appendix-3: (Related to Objective-2)

Histogram showing Comparison between Adjustment of different sub-groups of Hearing-Impaired students