

PREVALENCE OF STRESS AMONG PARENTS HAVING HEARING IMPAIRED CHILD IN NORTH INDIA.

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ABSTRACT

Objective: This study evaluates the level of stress of parents having hearing impaired children and to see the association with degree of hearing loss. **Methodology:** A cross-sectional (comparative) study conducted at King George's Medical University, U.P., Lucknow. Hearing-impaired children of age between 1 to 10 years of age and their parents included through convenience sampling method. Quantitative data of subjects recorded were hearing impairment detection age, degree of hearing loss, education level of parents, financial status. Qualitative data recorded were parents stress level through Perceived stress scale, a self-report tool with 36 items measuring the stress of the parent-child relationship and defining their psychological sources of stress. Available data analyzed and Quantitative data were expressed as mean (standard deviation) and qualitative as number (percent). A chi-square test was used to comparing the parenting stress score among studied groups. $P < 0.05$ was considered as statistically significant level. **Results:** The study result shows that 88.1% of fathers and 75.86% of the mother were having a severe degree of stress. Degree of stress was more in father compared to the stress of mother and their association was highly significant (<0.0001) Most of the children detected of having a hearing impairment at the age between 1 to 3 years. Association of stress with a degree of hearing loss shows that 66% of parents were severely stressed whose children were having severe to profound hearing loss and 73.33% of parents were severely stressed having children of moderately hearing loss. **Conclusions:** Severe stress in parents and significant association with the stress of father raises the possibility of a lack of awareness and neglect behavior. The specific resources of parenting stress among parents of different socioeconomic status should be explored in future studies so that appropriate interventions can be planned.

KEYWORDS: Parenting stress, Hearing impairment, education of parents.

INTRODUCTION

Globally, hearing loss is the most common sensory deficit in human beings. Hearing impairment can range from slight to profound.^[1] In India, 63 million people (6.3%) suffer from the significant auditory loss. Four in every 1000 children suffer from severe to profound hearing loss. With over 100,000 babies that are born with hearing deficiency every year. Rural areas have a high prevalence of hearing loss than urban areas.^[2] A child's hearing impairment affects the child, as well as his or her family (Jackson & Turnbull, 2004)^[3] Parenting children who are deaf or hard of hearing (D/HH) presents unique long-term challenges that can place them at a greater risk for elevated levels of parenting stress.^[4,5,6] Parents of hearing-impaired experience stress, not only in response to the initial diagnosis, but also due to increased financial

and time strains, difficult communication interactions with their children, feelings of stigmatization and isolation, and in adapting to the unique needs of their deaf child. Mother is the first in a family which gets exposure to communication difficulties of the child. While raising a hearing-impaired child, parents are faced with several chronic stresses including frequent visits to speech therapists, controversies about oral versus manual communication, and decisions about educational placement. These chronic stresses drain the parents energy, money, and time, and potentially may result in frustration, social isolation, anxiety, and depression.^[7,8] Deaf and hard of hearing children are getting a negative impact due to their parental stress. Hintermair (2006) explicates that the extremely stressed parent's children face more emotional, social and economic problems.^[9] The normal parents experience more stress due to the

child hearing impairment, his type and degree of hearing loss and the identification age of the child. Also, other factors participate to increase the stress level such as any other disability with the addition of hearing impairment, family socioeconomic status, parenting responsibilities. The societal positive support plays a positive role and depressing support plays a negative impact on the whole family unit.^[10]

This study aims to estimate the level of stress of parents and to find out different factors responsible for their stress which can help to alleviate stress and cope with hearing-impaired children.

AIMS AND OBJECTIVE

1. Estimation of the stress level of parents having hearing-impaired children.
2. To see the association between the stress of parent and the degree of hearing impairment of children.

MATERIAL AND METHOD

A cross-sectional observational study conducted at the department of neurology and department of ENT, KGMU, U.P., Lucknow. The sample for this study were one to ten years old children suffering from hearing impairment and their parents. A total of 100 parents of children with the above-mentioned problems were selected through convenience sampling method from those who referred to speech and language therapy clinic for children and for detection of hearing loss at a neurology clinic.

Inclusion criteria were having parents of hearing-impaired children between the age of 1-12 years, having just one child with this disability. The presence of both parents in the family, Education status of parents and employees of the father and not facing any serious financial crisis. Unwillingness to cooperate for completing the questionnaires and giving full answers they would have been excluded from the study. The study was approved by the ethical committee of KGMU, Lucknow and written informed consent was obtained

from all study participants. Quantitative data of subjects recorded were age at which child detected for hearing impairment, degree of hearing loss, education level of parents, their source of income and financial status. Qualitative data recorded were parents stress level through Perceived stress scale, a self-report tool with 36 items measuring the stress of the parent-child relationship and defining their psychological sources of stress.

Statistical analysis

All available data stored in a widespread excel data sheet. Analysis of data done by using SPSS software version 11.5 (SPSS Inc, Chicago, IL, USA). Quantitative data were expressed as mean (standard deviation) and qualitative as number (percent). A chi-square test was used to comparing the parenting stress score among studied groups. $P < 0.05$ was considered as statistically significant level.

RESULT

This study conducted on 100 parents of having children of different degrees of hearing loss, the majority of parent's education status is up to matriculation and only 30% of the father were graduate (**Table 1**). If we see a degree of stress 88.1% of fathers and 75.86% of the mother were having a severe degree of stress (**Table 2**). The study revealed that most of the children detected of having a hearing impairment at the age of 1 to 3 years (**Table 3, graph 1**). Education of parents plays an important role to handle the stress of parents of the hearing-impaired child as the majority (81%) of parents were educated up to matriculation but the association with stress level was not significant. The degree of stress was more in father compared to the stress of mother and their association was highly significant (<0.0001); (**Table 4, Table 5**). 89.66% of parents were severely stressed whose children were having severe to profound hearing loss and 73.33% of parents were severely stressed having children of moderately hearing loss (**Table 6, graph 2**).

Table 1: Education level of parent.

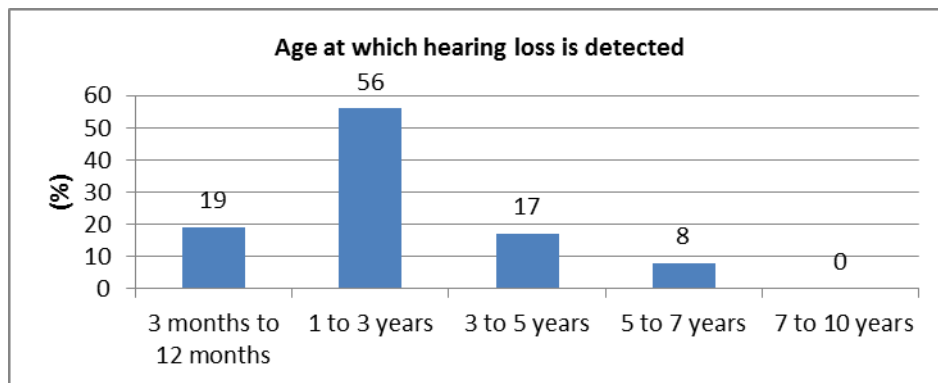
Education Level	Father N (%)	Mother N (%)
Illiterate	9	15
Matriculation	48	49
Graduation	34	18
Post Graduation.	9	18
Total	100	100

Table 2: Level of stress in parents.

Gender	Stress Level			Total	P value
	Poor	Moderate	Severe		
Male		5(11.9%)	37(88.1%)	42(100%)	0.12 NS
Female		14(24.14%)	44(75.86%)	58(100%)	
Total		19(19%)	81(81%)	100(100%)	

Table 3: the level of stress in parents according to the detection of hearing impairment detection age.

Age at which hearing loss was detected	N (%)	Stress Level		Total	P-value
		Moderate	Severe		
3 months to 12 months	19	12(63.16%)	7(36.84%)	19(100%)	<0.0001 HS
1 to 3 years	56	6(10.71%)	50(89.29%)	56(100%)	
3 to 5 years	17	1(5.88%)	16(94.12%)	17(100%)	
5 to 7 years	8	0(0%)	8(100%)	8(100%)	
7 to 10 years	0				
Total	100	19(19%)	81(81%)	100(100%)	



Graph 1: Bar diagram showing the level of stress in parents according to hearing impairment detection age.

Table 4: Level of stress according to the education of the father.

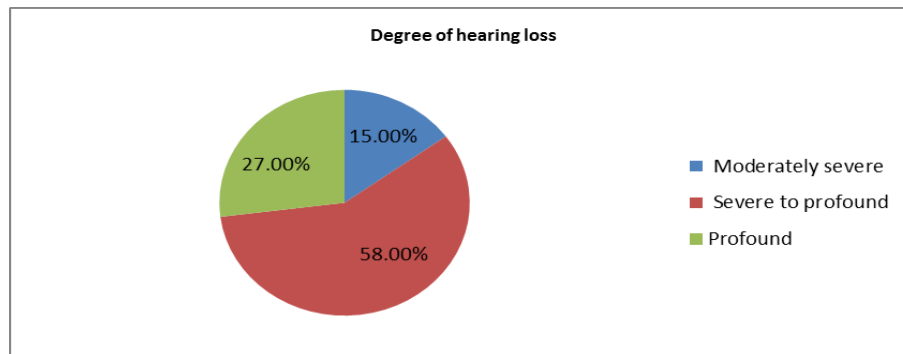
Father Education	Stress Level			Total	P value
	Poor	Moderate	Severe		
Illiterate		0(0%)	9(100%)	9(100%)	<0.0001 HS
Matriculation		3(6.25%)	45(93.75%)	48(100%)	
Graduation		10(29.41%)	24(70.59%)	34(100%)	
Post-graduation and above		6(66.67%)	3(33.33%)	9(100%)	
Total		19(19%)	81(81%)	100(100%)	

Table 5: Level of stress according to the education of Mother.

Mother	Stress Level			Total	P-value
	Poor	Moderate	Severe		
Illiterate		5(33.33%)	10(66.67%)	15(100%)	0.29 NS
Matriculation		6(12.24%)	43(87.76%)	49(100%)	
Graduation		4(22.22%)	14(77.78%)	18(100%)	
Post-graduation .and above		4(22.22%)	14(77.78%)	18(100%)	
Total		19(19%)	81(81%)	100(100%)	

Table 6: Association of stress and degree of hearing loss.

Degree of hearing loss	Stress Level			Total	P-value
	Poor	Moderate	Severe		
Moderately severe		4(26.67%)	11(73.33%)	15(100%)	0.03 S
Severe to profound		6(10.34%)	52(89.66%)	58(100%)	
Profound		9(33.33%)	18(66.67%)	27(100%)	
Total		19(19%)	81(81%)	100(100%)	



Graph 2: Pie diagram showing the association of stress and degree of hearing loss.

DISCUSSION

Our study results showed that the stress level of the father is 82% and 75% of the mother which is consistent with the findings of Faiza et al. (2013). She also concluded in her study significance difference between the stress level of fathers and mothers of hearing-impaired children. 52.6% of the fathers and 57.1% of mothers thought that they remain worried most of the time due to the hearing impairment of their child.^[11] Parents of hearing-impaired children always worried and disappointed, they facing in nurturing of their child because of the communication gap and some other related behavior abnormality. Parents beliefs that it's a curse of God and their child not able to survive normal life. They are not willing to accept the disability of their children and there approach towards their child always problematic. More than half of the respondents turned to God, mosques, and temples for coping after they had exhausted all avenues of treatment and were told by the physicians that there was "no hope" of a cure. Many researchers from India have reported that people often find relief in religious propitiation and surrender to the will of God when faced with intractable disease and disability.^[12,13] Faiza et al. (2013) also revealed that 74.9% of fathers and 77.7% of mothers said that they became disappointed about the fact that their children were not able to lead a normal life.^[11,14] The study of Quittner et al. constant with our finding; he also found elevated levels of parenting stress. In this study majority of children detected with hearing impairment were between 1 to 3 years and its association with the level of stress was highly significant (<0.0001). Our study subjects mostly belong to the poor or lower-middle-class families who come for medical assistants in our hospital. It may be because parents search medical specialist assistant as this school-going age of their children. In rural communities, the most important earning source person is a male who faces many challenges of the rehabilitation of his hearing-impaired child in society. Many of the parents have the main concern of getting medical assistant is to get a certificate for their children to avail of a government facility.^[4] Sameroff et al. found in their research that age plays a vital role to increase the stress in mothers, mothers feel a higher level of stress as their children grown-up. But, the results furthermore accomplished that age of the child did not influence the

quality of the life of mothers that she experienced due to the hearing loss of her children. The age of the child can be an important factor in parental stress. The poor socio-economic condition of the family is reported to be associated with more stress because of limited resources.^[15] Quittner, and Jackson (1990) compared the impact of stressful life events and chronic stressors related to parenting a child with hearing loss. They assessed mothers of young children (2 to 5 years of age) with severe to profound hearing loss.^[14] Study of Pipp-Siegel et. al. contrast with our findings that parents of younger children face less stress than the parents of adult children. The study when considering other variables they found that there is no strong connection between the age of the children and the parental stress.^[10,3] If we see association of stress level of parents with education of parents it shows that 93.75% of fathers were educated up to matriculation and 87.76% of mother were educated up to matriculation level and education status of father shows significant correlation with level of stress which is contrast with findings of Rivadeneira J et al, who found no significant associations between parenting stress and some demographic variables, such as mother's years of education, child's age, child's sex, and hearing device.^[16] These variables have shown to be predictors of parenting stress in early studies.^[10] Higher stress among parents who are engaged in a respectable occupation may be due to the higher expectations of their children, higher perception of shame, frustration at not being able to restore the condition of the child and more restrictions on their social and professional activities. The parents in less prestigious occupations may have lower expectations of their children and may be accustomed to feelings of helplessness.^[17]

CONCLUSION

Severe stress in parents and significant association with the stress of father raises the possibility of a lack of awareness and neglect behavior. Early detection of hearing impairment and specific measures for the habilitation of children should be planned by health providers. The specific resources of parenting stress among parents of different socioeconomic status should be explored in future studies so that appropriate interventions can be planned.

LIMITATION OF STUDY

The study conducted on a single center and limited factors included to assess the stress of parents. Study can conduct on large sample size to explore different factors responsible for stress of parents.

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