

## Rehabilitation Efforts and Psychological Health of Parents of Children with Deafness

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### ABSTRACT

*Background:* The negative psychological responses/crises in parents of children with deafness are common. Literature has revealed that parents experiencing negative emotions are less effective at nurturing language and facilitating psychosocial development and promoting intervention strategies of their children with disabilities including deafness. Therefore, identification of harmful psychological reactions to disability in parents is essential to promote effective intervention for children with deafness. *Objective:* The purpose of the study was to determine the psychological health (depression, anxiety and stress) of parents in the rehabilitation efforts of children with deafness and to determine the factor affecting and coping strategies in parents of children with deafness. *Method:* The psychological feeling of 113 parents of children with hearing impairment & were investigated using DASS 21 and factor affecting and coping strategies were determine by interview & informal questionnaire. *Results:* The results revealed high levels of depression, anxiety and stress in parents of children with disabilities. The statistical analysis revealed that parents of children without rehabilitation programs experienced more psychological problems than children who were receiving treatment. Females parents exhibited significantly higher scores of depression, anxiety and stress than male parents. *Conclusions:* The present study highlights the need for rehabilitative professionals to be aware of psychological consequences of disabilities that may be useful in providing appropriate counseling to parents and families; thereby facilitating the developmental progress in children with hearing impairment.

**Keywords:** Deaf, rehabilitation, depression, anxiety and stress, parents

### INTRODUCTION

The hearing impairment in a child often leads to a psychological crisis in the parent's life affecting the parent-child dynamics (Nancy & Mellon, 2009). The successful resolution of negative parental feelings facilitates better adaptation and coping behaviours to disability that influences significantly on child's overall development (Calderon et al, 1993; Calderon, et al, 1991). The maternal psychological health has a positive influence in acquiring efficient strategies for coping with a deaf child, who in turn facilitate children's emotional sensitivity, improves reading competence and problem solving behaviour. The children with hearing impairment also exhibited less impulsive behaviour, higher cognitive flexibility, and better social competence (Hintermair, 2006).

The literature has indicated that maternal stress and depression as one of the potential factors contributing to poorer outcomes with intervention strategies in children with deafness (Beardslee et al., 1983; Pip-Siegel S et al, 2002; punch et al., 2010). Parenting stress has clinical and social implications, such as child neglect and abuse and marital discord (Mash et al, 1983; Belsky et al, 1985; Meinzen-Derr et al., 2008; Kobosko, J. 2011). Thus, assessment and amelioration of parenting psychological health is critical to the welfare and quality of life of the child and the family (Brinchman et al, 1999, Davies, 2015). Moreover, Pipp-Siegel et al. (2002) suggested that more research on parental stress would be especially useful in the field of deaf rehabilitation. However, there is lack of literature on psychological responses of parents of children with hearing impairment in country like India.

Therefore, there is a need to assess the levels of depression, anxiety and stress and; determinants & coping mechanisms to these psychological reactions among parents of children with deafness. The study of parental psychological reactions in rehabilitation efforts of their deaf child may help the rehabilitation professionals to set the priorities and to devise the comprehensive treatment program. This knowledge may be useful in providing appropriate counseling to the parents which may facilitate better outcomes to management strategies for children with hearing impairment.

### OBJECTIVES

- To study the level of depression, anxiety and stress in rehabilitation efforts among parents of children with deafness.
- To study the detriments & coping mechanism to depression, anxiety and stress in parents of children with deafness.

### METHOD

#### Sample:

The request was made to the parents of children with hearing impairment to voluntarily participate in the study. Those who consented were recruited for the study. 113 parents in age range of 24-45 years comprising 79 (69.91%) females and 34 (30.08%) males having one or more children with deafness in the age range of 3-12 years were selected employing purposive sampling technique.

#### Tool:

The demographic data form was used to collect information about the participants that included: age, gender, residential settings, educational background of parents, number of children, number of children with disability, type and degree of disability, age and gender of the disable child. After this, the Depression, Anxiety, Stress Scale (DASS21) short form developed by Lovibond & Lovibond (1995) translated in Hindi as per AAOS guidelines, was used to determine the depression, anxiety & stress levels in parents of children with hearing impairment.

DASS21 is a self-report inventory having 21 items and three sub scales of depression, anxiety and stress, each consisting of 7 items, reflecting negative emotional symptoms of parents of children with hearing impairment. Apart from this, all participants were asked if they received any physical or social support from their family or community to determine the detriments of psychological reactions. The participants were also asked to describe how they coped with their child's disability.

#### Procedure:

After collecting informed consent and demographic information, the DASS21 questionnaire was presented to the participants. They were requested to respond all the items of the scale and express their feelings, thinking and emotional conditions on a four-point Likert's severity scale (0, 1, 2 and 3) over the previous week with the intention of emphasizing states over traits. The literate participants responded the questionnaire by themselves whereas the questionnaire was read out to the illiterate participants in their native language by the researcher. However, it was ensured that clarification of queries do not affect the participant's response. The queries of the participants while responding to the questionnaire were handled before, during and after the completion of the scale. The participants were allowed to review their responses. The scoring of the DASS21 responses was performed according to the manual of the scale.

#### Statistical Analysis:

The data collected were subjected to simple analysis of variance (ANOVA). A t-Test for Independent Samples were used to find out whether there was a statistically significant difference between the male and female respondents to psychological reactions to the disability and rehabilitation efforts. To determine the significant psychological traits among the groups, comparisons of mean were treated with post hoc Duncan's test. Psychological traits were considered significant at p value 0.05.

### RESULTS

Total 113 participants with mean age of 35.8 years (SD  $\pm$  7.5) of both genders having one or more children with deafness responded DASS21. Majority of the parents

**Table 1**  
The participant's demographics characteristics

	Respondent's characteristics	Results
Respondents	Female	79 (69.91%)
	Male	34 (30.08%)
Literacy	Illiterate	16 (14.15 %)
	Literate	97 (85.84%)
Occupation	Unskilled/Skilled	34 (30.08%)
	Clerical	55 (48.62%)
	Professional	6 (9.73%)
	Unknown	18 (15.92%)
Sex of the Child	Male	79/113 (69.91%)
	Female	40/113 (35.39%)
Degree of dis ability	Severe	78 (69.02%)
	Profound	35 (30.98%)
Intervention	No intervention	42 (37.16%)
	Hearing Aid + Cochlear implant Speech-Language therapy	71 (62.83%)

**Table 2**  
Depicting Means, Standard Deviation (in parenthesis) for depression, anxiety and stress in parents of DCWOR, DCWHA, DCWCI and DCWARP.

	DCWOR	DCWHA	DCWCI	DCWARP	ANOVA	
	Mean (S.D.)				F (3,109)	p - value
DEPRESSION	23.44 (4.81)	14.72 (7.96)	18.48 (6.78 )	17.16 (5.64)	4.810	0.035
ANXIETY	21.48 (5.69)	16.68 (4.18)	22.72(6.19)	17.56(6.36)	3.436	0.023
STRESS	14.72 (8.11)	13.44 (6.56)	14.88 (9.03)	18.41 (9.07)	5.036	0.019

responded the questionnaire by themselves. There were 79 (69.91%) mothers and 34 (30.08%) fathers who responded to questionnaire. The demographic characteristics of the respondents to the DASS21 are shown in Table 1.

The descriptive analyses of DASS21 revealed that participants exhibited varying levels of psychological reactions to the rehabilitation efforts in their children with deafness. The depressions of mild, moderate and severe degrees were found in 19.8%, 27.9% and 29.3% of

respondents respectively. The anxieties of mild, moderate and severe levels were recorded in 23.3%, 15.1% and 44.2% of the respondents. The psychological stresses of mild, moderate and severe levels were recorded in 40.7%, 32.6% and 8.1% of the participants correspondingly.

The mean scores of parental psychological reactions to their child's disability and rehabilitation efforts are provided in the Table-2. The means, standard deviation for depression, anxiety and stress scores of parents of

children with disabilities were subjected to the simple analysis of variance to compare the depression, anxiety and stress in parents of deaf children without rehabilitation (DCWOR), deaf children with hearing aid (DCWHA), deaf children with cochlear implant (DCWCI) and deaf children with aural rehabilitation program (DCWARP).

Table 2 reveals that the mean scores of parental depression, anxiety and stress of different children groups in rehabilitation processes differ significantly at F (3,109) = 4.810, 3.436 and 5,036; P<0.05 respectively). Post-hoc Duncan's test revealed that parents of deaf children without the rehabilitation scored significantly more for depression (mean= 23.44, SD= 4.81) compared to the rest of the parent group.

The anxiety and stress scores were significantly more in parents (mean= 22.71, SD= 6.19 and mean= 18.41, SD= 9.07 respectively of deaf children with hearing aid with cochlear implant, followed by deaf children with aural rehabilitation program). The female scored more on DASS21 i.e. the females reported greater degree of psychological reactions than male respondents. The mean psychological reaction scores with error bars of male and female participants having deaf children are shown in Figure 1.

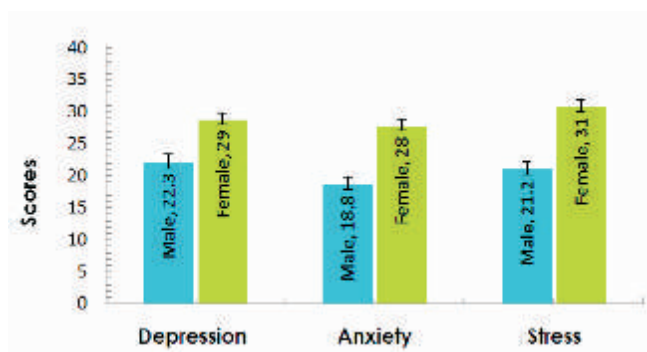


Figure 1. Mean scores obtained in three psychological domains by the male & female respondents on DASS21

Independent sample t-test was used to compare the psychological traits of male & female parents of deaf children. A significant difference was found for depression, anxiety and stress scores between male and

female participants with t (111) = 3.012, 4.084 and 2.193 respectively at p<0.05. The parents having female children exhibited greater degree of depression, anxiety and stress irrespective of whether their children were receiving treatment or not. The parents of female deaf child reported greater degree of psychological reaction as compared to parents having deaf child which was statistically significant at p<0.05.

**DISCUSSION**

The study found that 82.6% parents experienced some level of psychological reaction in rehabilitation efforts for their deaf child/children. The data indicates variable depression, anxiety and stress levels in parents of deaf children. The parents of children without a rehabilitation program experienced greater levels of psychological reactions. Anxiety was the most common psychological reaction affecting 44.2% parents with severe degree of anxiety reactions.

The analysis of parental data in Table-1 reveals several influencing factors for psychological reactions. These include: feelings of frustration from the economic burden of treatment, absence or scarcity of rehabilitation facilities and the availability of professionals to provide treatment and improve the condition of the child, lack of support from community and restrictions on their social participation and loss of earning because of frequent absenteeism from work activities to attend aural rehabilitation program. Quittner, et al (2010) reported similar detriment for parental psychological reactions to disability in their children.

Table-2 shows that depression, anxiety and stress levels differed significantly in parents of deaf children who are without rehabilitation program and engaged in various management programs. The mean score for depression and stress was greater in parents of children without rehabilitation program i.e. children without any treatment. Crowe, et al. (2014) reported that non availability of rehabilitation or delayed rehabilitation is a predictor of stress and can place a parent at high risk for a clinically significant level of stress. These stressors may have a direct correlation to the negative parental attitudes and interactions as caregivers are often report frustration and decreased responsiveness to the child's needs.

**Table-3**  
**Quantitative responses to experience of disable child**

Support received (physical, emotional & financial) received from family/ friends/Non Governmental & Government Agencies	35.71% (35/98)
Approached religious persons/priest in temple, mosque or church as coping mechanism,	74.49% (73/98)

Figure-1 shows that female parents were significantly more affected psychologically than the male parents. Female parents reported despair in arranging finances for treatment, in providing physical support & care, and constant supervision to hearing devices fitted to deaf children and its care & maintenance. Whitney et al (2003) and Decker et al (2012) reported similar detriments of parental psychological reactions.

Further, the parents reported high level of psychological reactions due to frequent quarrel in family when the deaf child was female. Padencheri et al (2011) reported that marital relationship is more impaired when the child with disability is female. This finding is of particular importance because, traditionally in India, the female child is considered more of a burden than a male child (Gupta, 1987). Thus, it can be speculated that a female child with disability is likely to be more burdensome.

The parents whose children were fitted with hearing aid or cochlear implant and attending rehabilitation program exhibited milder level of depression (14.72 SD± 7.96), anxiety (16.68 SD ±4.18) and stress (13.44 SD±6.56) probably being satisfied with some respite that the children are getting treatment and might hoped that the condition of the child will improve over the period of time. This finding can be supported by the study of Quittner et al, (2010), they found that parents of children with hearing loss develop context specific stressors that include communication barriers, management of hearing aids & cochlear implants, and financial needs. Pipp-Siegeletal. (2002) reported factors related to the parents such as family support, parenting hassles, and income can also induce stress in parents.

Thus, the data suggested that lack of support (physical, emotional & financial) was the major factors of parental psychological crises in rehabilitation effort of children

with deafness. Therefore, it was decided to separately quantitatively determine the parental experiences and copying strategies to disability. Two open ended questions i.e. what kind of support they received from the society or government and how they are coping with the disability. Total 98 participants answered these questions. The quantitative responses of parental experiences are shown in Table-3.

Table-3 indicates that 64.29% parents said that no one is helping them to take care of their child and 74.49% reported that they turned to religious clerics in mosques, temples and churches to cope with the disability. The unavailability of help from family, friend or the community and government at large; faith in religion was developed to seek divine treatment and to cope with the child's disability. This finding is contrary to general opinion that people in developing or underdeveloped countries live in extended families and close-knit communities support one another (Padencheri et al, 2011). Upadhyaya & Havalappanavar (2008) reported that non cooperation among the family members could be due to the stigma of disability. The lack of support measures in the family may in turn affect not only the condition of the child, but the family as a whole.

In developing countries like India where formal social support resources such as parent groups or family counseling facilities are very limited, absence of support from family and friends can be very stressful. Parents turned to divine places like mosques, temples and churches to seek spiritual healing for themselves and child due to the absence of clinical and psychological resources for treatment. Farheen et al, (2008) and Gupta (2011) reported that people often find relief in religious participation and surrender to the will of God when faced with difficult situation like disease and disability.

## CONCLUSION

The parent-child relationship is one of the most powerful environmental influences on child's development. The hearing impairment not only affects the biological development of the child but also impacts the parent-child relationship affecting the parental psychological well being. The study data reflects that the considerable study populations suffer from depression, anxiety & stress. The influencing factors may include frustration due to the economic burden for treatment, constant support, care & maintenance of hearing devices, lack of facilities & non-availability of professionals to treat the child, lack of support from family & community, restrictions on their social participation and other life's roles. Female (mother) participants suffer more psychological reactions in rehabilitation efforts as mothers are expected to look after the children & family facility and fulfill all family needs in limited budget. The professionals must be aware of various sources of parental psychological crises.

Parental psychological health has a direct correlation to the parental negative responsiveness to the child's needs affecting the child's progress (Hadadian & Rose, 1991). Hence, it is important that the professionals must identify these psychological reactions and help the parents to resolve them appropriately such as parental meetings and arranging group psychological counseling. Since parents of children with deafness are likely to be more affected psychologically it is necessary that mental health care program launched by Government of India must be embraced. The Mental Health Care Act 2017 was passed on 7 April 2017 and came into force from July 7, 2018. Thus, this study supports the implementation of Mental Health Program for parents with disabilities. This would improve the well being of families and foster the child's development.

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