

ANXIETY AND DEPRESSION IN MOTHERS OF DISABLED AND NON-DISABLED CHILDREN

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Abstract

Objectives: To find the prevalence of anxiety and depression in mothers of disabled and non-disabled children and to find the association of anxiety and depression with demographic characteristics in district Sheikhpura.

Method: A cross sectional comparative study was conducted to find differences in the level of anxiety and depression in both groups of mothers i.e. among mothers of disabled and non-disabled children. A convenient sampling technique was used to select 340 mothers belonging to both groups (n = 170 in each group). Urdu version of Hospital Anxiety and Depression Scale (HADS) was used to assess anxiety and depression in mothers. Data was analyzed using ANCOVA (SPSS version 17).

Results: The Results of ANCOVA revealed statistically significant differences ($p < .001$) in the level of anxiety and depression in both groups of mothers.

Majority of mothers (78%) belonging to children with disability had anxiety. Only 52% mothers belonging to non-disabled children had anxiety. Similarly, as compared to 46% mothers of non-disabled children, 76% mothers belonging to children with disability had depression. Correlation analysis revealed a significantly positive relationship of anxiety and depression with mothers' age ($p < .05$) and statistically significant inverse relationship with disabled child's age, mothers' educational ($p < .01$) and family income status.

Conclusion: As the disabled child advances in age, mother better understands the demands of raising a disabled child and thus can cope with these demands affectively and with lesser anxiety. Implications of the study would assist psychologists in devising techniques for reducing level of anxiety and depression in mothers of disabled children.

Key words: Anxiety, Depression, Children with disabilities

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Introduction

Birth of a baby is supposed to make the parents feel excited and wonderful but these feelings turn into disappointment when they come to know about the disability of their newly born. In both the parents (Mother and Father), the news of having a child with disability induces complex feelings like those of emotional shock, denial, guilt, anxiety and depression.

Worldwide, an estimated 350 million people currently suffer from depression and global current pre-

valence for anxiety disorders is about 7.3%.¹ About 10% of people in Western countries experience anxiety and 9% experience depression.² It is estimated that in Pakistan prevalence of child disability is quite high i.e. there are about 5.035 million people with some sort of disability. Among these, physically disabled have highest prevalence rate (19.2%), blind have prevalence rate of 8.2%, mentally retarded have 7.6%, deaf 7.5% and prevalence of multiple disabilities stands at 8.3%.³ It is worth mentioning that rural areas constitute 66% of the total disabled population as compared to 34% of such population in the urban areas. The ratio of disability as a whole in Punjab is quite high, as 60% individuals with disabilities live in Punjab as compared to other provinces of Pakistan. Whereas 2.90% people with disability lives in district Sheikhupura.⁴

Studies related to child disability casting negative impact (such as added stress, anxiety & depression) on the entire family have dominated much of the research done during the past three decades.^{5,6} In support of the view that disability leads to negative outcomes, a couple of comparative studies have found that mothers of children with disabilities are more prone to experience neurotic symptoms like anxiety and depression as compared to parents of children without disabilities i.e.⁷⁻⁹

In Pakistan, due to cultural impact, mothers are responsible for the care and upbringing of their children in daily life. Being bread winners of their families, fathers most of the time stay outside home. To be mother of a disabled child means exponentially increase of the extra time and attention for the child. Being parents of a special child is a stigma that parents have to face in society. Altogether, these stressors have often been assumed to put the parents of child with disability (especially mothers) at risk of suffering from depression and anxiety.^{10,11}

Though the prevalence of parental depression and anxiety varies in different studies but these studies have shown in unequivocal terms that differences in child characteristics are predictive of parental depression and stress.¹² Noted that mothers raising a child with Attention Deficit Hyperactivity Disorder (ADHD) often experience heightened level of stress. Similarly parents of children with autism report higher level of anxiety and depression and more adjustment problems than parents of children with Down syndrome.^{13,14} Mothers of children with cerebral palsy have exhibited higher level of stress cum depression with associated denial symptomatology.¹⁵ However, parents

of deaf and visually impaired children do not report elevated stress and anxiety as their children are able to adjust in society to a greater extent as compare to other developmental disabilities.^{16,17}

Studies related to depression in parents of children with disabilities differ in discussing whether to what extent this relationship is affected by socio-demographic factors such as marital status, family income, parents' education and age, etc.¹⁸ state that childhood disability and stress is more common in parents of lower socio-economic status and depressive symptoms are more prevalent in single mother of a disabled child.¹⁹ Possibility of stress and worry is heightened when there is a child with disability in a family of limited resources.²⁰ Did not find parental depression to be related to either marital or socio-economic status.²¹ Found that depression scores declined when education and income levels of parents rose.

Working with special children is a challenging task for all the stakeholders including parents, teachers, professionals, and other related persons. It involves a multidisciplinary approach to provide maximum relevant services to the special children so as to meet their special needs. Coordination between parents and other stakeholders makes this approach effective and outcome oriented. It is vital to get the maximum cooperation from the parents so as to work with the child smoothly. Parents' and particularly mothers' 'active involvement in the developmental phases of their special children decides the future of their special children. For their active involvement and full cooperation, mothers should be mentally and physically relaxed while rearing a child with disability. Therefore, the major objective of the present study was to investigate whether child disability causes depression and anxiety in mothers. It was also intended to explore the prevalence of anxiety and depression in mothers of disabled and non-disabled children. It was further aimed to explore the relationship among demographic characteristics, anxiety and depression into two groups of mothers.

On the basis of existing literature following hypotheses were formulated:

1. Mothers of disabled children will experience more anxiety and depression than mothers of non-disabled children.
2. Elevated Hospital Anxiety and Depression Scale (HADS) scores (HADS > 7) will be more common in mothers of disabled children than in mothers of non-disabled children.
3. There would be reciprocal relationships among

Table 1: Demographic characteristics of mothers and their children with disability.

Mothers (n = 170)		Children (n = 170)	
Age in Years		Age in Years	
M (SD)	37.99 (5.93)	M (SD)	11.21 (2.77)
Range	25 – 45	Range	5 – 15
Level of Education	<i>f</i> (%)	Gender	<i>f</i> (%)
Uneducated	60 (35.2)	Boys	104 (61.17)
Primary –Middle	75 (44.11)	Girls	66 (38.82)
Matric – Intermediate	29 (17.05)	Type of Disability	
Graduation – Post Graduation	06 (3.5)	Hearing Impaired	57 (33.52)
Marital Status		Mentally Challenged	54 (31.76)
Married	164 (96.47)	Physically Disabled	38 (22.35)
Widow/ Divorced	6 (3.5)	Visually Impaired	21 (12.35)
Monthly Family Income		Level of Education	
0 – 10000	93 (54.70)	Nursery – KG-II	89 (52.35)
11000 – 20000	60 (35.29)	One – Five	72 (42.35)
21000 – 30000	12 (7)	Six – Eight	9 (5.29)
31000 – 40000	5 (2.9)	Birth Order	
Family System		Eldest	54 (31.76)
Nuclear	138 (81.17)	Middle	110 (64.70)
Joint	32 (18.82)	Youngest	6 (3.52)
Number of Children			
One	8 (4.70)		
Two	15 (8.82)		
Three or more	147 (86.47)		
Number of Disabled children			
One	118 (69.41)		
Two or more	52 (30.58)		

age of child, mother's age, mother's education and family income with depression and anxiety level of mothers.

Method

Participants

To find the differences in level of anxiety and depression in mothers of disabled and non-disabled children, a cross sectional study was conducted in September, 2013. A convenient sample (N =340) of mothers

of disabled and non-disabled children was taken from District Sheikhpura. Mothers of disabled children (n = 170), with age range of 25 to 45 ($M = 37.99$, $SD = 5.93$) were randomly recruited from four Govt. special education centers located in Sheikhpura. These centers run under the supervision of the Punjab government. The total number of enrolled students from four centers was 514. In all 200 mothers were contacted for this study. Thirty of them were excluded from the study on the basis of language barrier, health issues and having age up to 45.

Second segment of sample consisted of mothers of

non-disabled children living in the same geographical region and thus having same demographic characteristics (age range, marital status, education) (Table 1).

Instruments

Demographics Questionnaire

The demographics questionnaire was developed to obtain some basic information related to the children (i.e. gender, age, type of disability, education level, and birth order of child), their mothers and the family (i.e. age, qualification, no of children, family monthly income, marital status and family system).

Hospital Anxiety and Depression Scale (HADS)

Hospital Anxiety and Depression Scale (HADS) is a self – report inventory originally developed by²² and later translated into Urdu language by.²³ It is used to measure the state of anxiety and depression. HADS is a set of two self-reporting subscales: namely Anxiety and Depression. The number of total items is 14 with 7 items in each subscale. The respondents mark one of the four possible responses to indicate how they have been feeling during the past week. According to increase in the severity of the symptoms, response categories are scored as 0, 1, 2 and 3. The respondent can score between 0 to 21 for either anxiety or depression. The scores on HADS is divided into normal (≤ 7), mild,⁸⁻¹⁰ moderate¹¹⁻¹⁴ and severe¹⁵⁻²¹ categories suggested by^{22,13,24} had reported that in different cultural and ethnic groups, reliability of Urdu version of HADS scale is good i.e. ranges from .66 to .74. For the present sample the Chronbach’s alpha reliability coefficient was carried out for HADS subscales which showed reasonably high reliability i.e. α value ranging from .77 to .79.

Procedure

For data collection, psychologists of special education centers were engaged. Mothers of disabled children

were interviewed during routine mother – teacher and mother – psychologist meetings. Only those mothers were interviewed who agreed to participate in the study. A short structured interview was conducted to obtain demographic information about child, their mothers and family. Finally, taking in view how a mother had been feeling in the last week, each respondent was individually asked to answer the HADS questions. Respondents self – administered the questionnaire if they could read it otherwise it was read out to them and their responses were noted. Presence of any other person was restricted while participants were responding to the questionnaire so that they could freely answer without any interference. With the help of mothers of special children, the mothers of normal children were approached at their home by the researchers. The procedure to get information on questionnaires was kept same as was for mothers of special children.

Results

One of the objectives of the study was to compare the mothers of disabled and non-disabled children on scores of HADS. Since mother education and family income were thought to influence anxiety and depression, so both of said factors were entered as a covariant in an analysis of covariance (ANCOVA). Differences in the ‘Anxiety mean scores’[F (1,336) = 32.41, $p < .001$; medium effect size] and in ‘Depression mean scores’[F (1, 336) = 42.26, $p < .001$; medium size effect] were significant. This indicates that mothers of children with disabilities experience more anxiety and depression than mothers of non-disabled children as per hypothesis – 1 (Table 2).

The distribution of mothers’ anxiety and depression mean scores is shown in Figures 1 and 2, respectively. The scores on HADS were divided into normal, mild, moderate and severe categories as suggested by.²³

From Figure 1 it is evident that majority of the mothers with disabled children (78%) had reported the presence of mild to severe anxiety symptoms as com-

Table 2: ANCOVA Analysis of ‘Anxiety and Depression on HADS’ Scores for Mothers of Disabled and Non-disabled Children (N = 340)

df = 1, 336

Mother of Disabled Child (n = 170)			Mother of Non-disabled Child (n = 170)			
Scales	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>P</i>
Anxiety	10.70	3.79	8.11	3.45	32.41	.001
Depression	9.98	3.49	7.31	3.07	42.26	.001

pared to mothers of non-disabled children (52%) who had mainly experienced mild to moderate level of anxiety (Fig. 1).

On analyzing depression level, Figure 2 reveals that 76% mothers of disabled children in the study had experienced various degrees of depressive symptoms ranging from 9% (severe) to 37% (mild). Comparatively, only 46% mothers of non-disabled children had self reported depressive symptoms (severe depression in only 0.6% mothers) (Fig. 2).

These findings support our second hypothesis that mothers of children with disabilities suffer from a higher level of anxiety and depression. The difference in prevalence of anxiety and depression is statistically significant as compared to prevalence in mothers of non-disabled children.

Results from correlation matrix showed that age of the child was positively and significantly ($p < .05$) related to mother's anxiety and depression level in non-disabled children. However age of the child was negatively related to anxiety in mothers of children with disabilities while it was not related to depression contrary to expectations. Mother age was positively and significantly ($p < .05$) related to anxiety and depression in both groups of mothers i.e. in mothers of disabled and non-disabled children. Mother education, however, was inversely but significantly ($p < .01$) related to anxiety and depression in both groups of mothers. Table 3 further indicates that family income was negatively related to anxiety and depression in both groups of mothers. However, this relation was significant only in mothers of non-disabled children ($p < .05$) (Table 3).

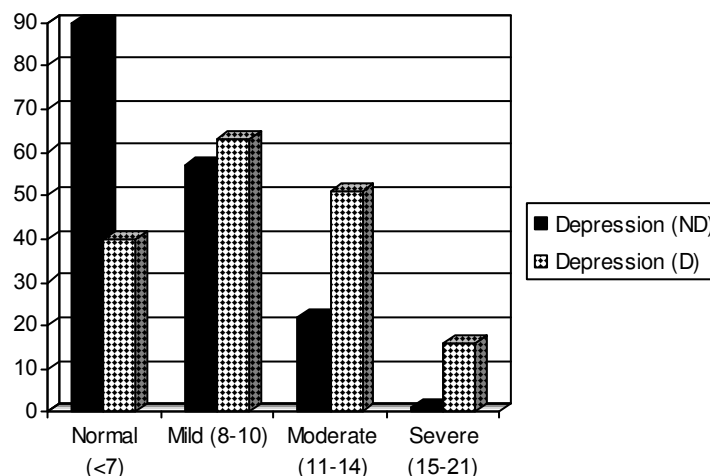


Figure 1: Mean scores of 'Anxiety on HADS' reported by mothers of disabled and non-disabled children.

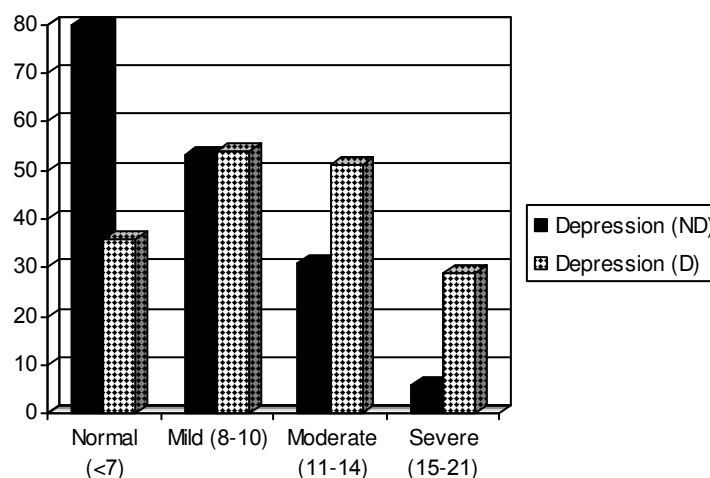


Figure 2: Means scores of 'Depression on HADS' in mothers of disabled and non-disabled children.

Table 3: Summary of Inter-correlations between Major Study Variables.

Note: Inter-correlations for mothers of disabled children (n = 170) are presented above the diagonal and inter-correlations for mothers of non-disabled children (n = 170) are presented below the diagonal.

* $p < .05$ ** $p < .01$

Variables	1	2	3	4	5	6
1. Age of child	-	.48**	-.21**	-.02	-.02	.00
2. Mother's age	.56**	-	-.07	-.04	.02	.09
3. Mother' education	-.29**	-.30**	-	.13	-.25**	-.39**
4. Family income	-.16*	-.14	.30**	-	-.09	-.09
5. Anxiety	.15*	-.02	-.15*	-.18*	-	-.64**
6. Depression	.19*	.05	-.17*	-.17*	.59**	

Discussion

The current research was designed to determine the mental health of mothers of disabled and non-disabled children. Research aimed to investigate how child disability affects mother's mental health and makes them susceptible to experience anxiety and depression. This comparative study aimed to investigate and compare the prevalence of anxiety and depression in a sample made up of two groups: one group made up of mothers of children with disability and the other group comprising of mothers with no disability of their children. It further aimed at exploring the relationship of other demographic variables such as age of child, mother's age, mother's education, family income with anxiety and depression into two groups of mothers.

It was hypothesized that even after controlling mother education and family income, mothers having children with disability would experience more anxiety and depression as compared to mothers having non-disabled children. Results of study show that mothers of children with disability have reported the higher level of anxiety and depressive symptoms. These results remain consistent with other researches which have explored anxiety and depression in parents of disabled and non-disabled children. For example,²⁵ conducted a study with parents of 120 visually impaired and normal children and found that parents of visually impaired children experienced more anxiety and depression than the parents of normal children. Depressive symptoms were more frequent in mothers of mentally challenged children than general population.²⁶

Psychological distress (like anxiety and depression) is an inevitable consequence of having children with any type of disability. Giving birth to, bringing up a child and spending time with a disabled child may provoke anxiety and depression in parents especially in mothers.¹⁰ It may also be due to the fact that mother takes on a larger part of the extra care and practical work that the child with disabilities requires. They more often feel unable to pursue their own interests due to child disability. Therefore, mothers of children with disability may be more vulnerable to experience anxiety and depression than mothers of non-disabled children.⁶

Another assumption of the study was to investigate the prevalence of anxiety and depression in two groups of mothers. Results of the current study indicate that 78% of the mothers of disabled children had anxiety and 76% had various degrees of depression. In

our region of South East Asia, anxiety levels among mothers of disabled children are higher than those reported in the global statistics (7%) for anxiety.¹ However, in our region, levels of depression among mothers of children with disability are equal to those quoted in the global statistics (10%) for depression.¹ Our findings are in consonance with the findings of.²⁷ Why mothers of children with disabilities are at an increased risk of psychological distress than mothers of children without disability? It is because of the fact that caring a child with disability with an uncertain future is a lifelong challenging job and that to in the presence of an inadequate support from the family and the community.²⁸ In similar vein,⁹ have reported socio-emotional burden, disruption of family routine and disturbance in family interaction for mothers with intellectually disabled children. It has been observed that most severe reaction shown towards the birth of a disabled child is depression. The survival of an abnormal child is more painful for the parents than the death of a normal child.^{29,30} From these findings it becomes clear that disability brings about a higher degree of stress, depression and rage among the parents.

Lastly, data was further explored regarding anxiety and depression in association with major demographic characteristics in mothers of disabled and non-disabled children. Results show that mother's age was positively related with anxiety and depression into two groups of mothers. This relationship, however, was not strong enough in mothers of children with disability. These findings are in line with²⁷ who also observed no significant relationship between the mothers' depression and their ages. Mother education was inversely and strongly related with depression and anxiety of mothers. These findings corroborated with previous studies^{14,31} that stated depression is high among illiterate parents of handicapped children. This may be due to the fact that education and knowledge may add insight how to handle their children with disability better than non-educated mothers. Educated mothers may also choose the right resources for rehabilitation and management of their children.

The findings of this study further indicate an inverse relationship between family income and mother's anxiety and depression. Mothers who belonged to low family income group reported high level of anxiety and depression than mothers belonging to high income group. Findings are supplemented by early researches^{12,30} which reported the association of economic status with mothers' stress and child behavioral problems in ADHD children.

In fact, in Pakistan available education and related services are free for children with disability. Nevertheless, the government sponsored facilities are not enough to cater to the expenses involved in care taking demands related to special children. This limited sponsorship of the state adds to the financial woes of the families bearing special children; especially families from the lowest socio-economic group suffer badly. Lastly, a very small and negative relationship was found between age of non-disabled child and mother's anxiety. No relationship was found between child age and mother's depression into group of mother of children with disability. With the passage of time, mothers may not find it more difficult to deal with the demands of raising a disabled child as they become habitual of it. Similarly³² found no difference in parenting stress between parents of school – age children with autism and adolescent children with autism.

Conclusion

Concluding the discussion, one may say that mothers raising the child with disability experience more anxiety and depression than mothers of non-disabled children. The prevalence of anxiety and depression is 78% and 76% respectively in mothers of disabled children. Comparatively, in mothers of non-disabled children prevalence of anxiety stands at 53% and depression values at 48%. Mother education, family income and age of the child are inversely related to mothers' anxiety and depression. Mother age is positively related to anxiety and depression.

Implications

The present research findings may help in outlining several types of psychological counseling sessions for mothers of children with disability. This research would also help in the planning of rehabilitation of children with disability and their parents. Such measures offer not only sufficient information on the children disabilities but also provide psychological support for the mothers. Finally, the inferences of the current venture may serve as baseline information for devising techniques and ways for reducing elevated levels of anxiety and depression in mothers and hence lead to better maternal mental health.

Limitations and Suggestions

The present study bore some limitations:

1. It is a small scaled study related to just 340 mothers from small circumscribed location in Sheikhpura and these findings thus cannot be generalized to all population and to urban areas.
2. The results of present study rely on single administration of HADS. The future studies should preferably use some other structured diagnostic interviews to get an insight about the severity of anxiety and depression in parents having children with disabilities.
3. Current research has been restricted to responses to questionnaires. It is recommended that in future qualitative methods of data collection may be employed to get the better understanding of the baseline factors affecting mother mental health.
4. It is recommended that psychologists working in special education institutes should adopt an integrated approach for successful anxiety and depression management. Integrated approach should include counseling both health and occupational, psychosocial services, and mother engagement in relaxation activities.

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