



Relationship between Anxiety and Quality of life in Mothers of Cerebral Palsy Children

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Abstract

The purpose of this study was to investigate the relationship among Anxiety and Quality of life in Mothers of Cerebral Palsy Children. The study was conducted in Samvedna Trust for handicapped and in the counselling Centre, Department of Psychology in the Allahabad city. 107 mothers having one or more than one child with cerebral palsy were included in the study. State Trait Anxiety Inventory (STAI) and Nottingham Health Profiles Part -1 (NHP) were used to assess anxiety and quality of life of mothers. The assessments were performed during children's assessment Samvedna Trust for handicapped and in the counselling Centre, Department of Psychology in the Allahabad city Allahabad. The findings of the study suggest a significant correlation between TAI and all the dimensions of NHP. The findings of this study indicated that mothers of Cerebral Palsy Children have reported high level of anxiety. Increased anxiety level affected with badly in mothers quality of life. The findings of this study indicated that mothers with cerebral palsy have reported high level of anxiety. Increased anxiety level affected with badly in mothers quality of life. The study suggests the need of effective rehabilitation programs followed by proper counselling and care which offer not only information on the children's disabilities but also psychological support for the mothers.

Keywords: Anxiety, Mothers of Cerebral Palsy Children, quality of life.

Introduction

Anxiety is a feeling of fear, uneasiness, and worry, usually generalized and unfocused as an overreaction to a situation that is only subjectively seen as menacing (Bouras & Holt, 2007). Having disability brings about different hardness for child and his/her parents. Mothers have to undertake too much stress because they are alone with their children in daily life. Not all mothers of children with disabilities have difficulties of

adaptation even when they have to face highly stressful life situations. However, it has been explained that children and mothers are at risk of stress-related problems when mothers are overburdened by the demands of care giving, earning a living, and other responsibilities (Ganong et. al., 1999). This condition commonly starts with a shock. Sometimes there are feelings of guilt, sorrow and helplessness. Sousa & Singhvi (2011) identified that 71% mothers of children with cerebral palsy were depressed. The reported contributing factors of depression were poor spousal support, low education, unemployment and increasing age. When children are diagnosed with developmental delays, their parents may experience psychological turmoil similar to that experienced by suicidal individuals (Ellis & Hirsch, 2000). The most affected person in the family is usually mother in such a situation. Mothers of children with disabilities often experience greater stress and emotional demands than do other mothers (Smith et. al, 1993), which affect the quality of life in mothers.

Hence the aim of our study is to determine the relationship among anxiety with quality of life on mothers with disabled children.

The logo for JETIR (Journal of Emerging Technologies and Innovative Research) is a watermark in the background. It features a shield-like shape with a laurel wreath border. Inside the wreath is a stylized flower with five petals in different colors: red, yellow, green, blue, and purple. The word 'JETIR' is written in large, bold, serif letters across the top of the shield.

Materials & Methods

The purpose of this study was to investigate the relationship among Anxiety and Quality of life in Mothers of Cerebral Palsy Children

Sample

170 mothers of Cerebral Palsy Children were contacted for the purpose of the study. Participants were assured for the confidentiality. Out of 170 mothers of Cerebral Palsy Children, only 107 mothers accepted participating in the present study.

Procedures

First the mothers of Cerebral Palsy Children were told the purpose of the study. They were described in detail the related information and the total time needed from them. During this period a good rapport was established with these mothers and it was also assured to them that their response and identity would be kept confidential and would be used only for the research purposes. After taking the prior permission, State-Trait Anxiety Inventory (STAI) was used to assess anxiety and Nottingham Health Profile was used to assess quality of life of the mothers of Cerebral Palsy Children.

Measures

1. State- Trait Anxiety Inventory (STAI)

State- Trait Anxiety Inventory by Spielberger, Gorsuch and Lushene (1970) has been used in present research. STAI is a 20- item self report rating scale for measuring state and trait anxiety. The STAI is a validated 20 item self report assessment device which includes separate measures of state and trait anxiety.

The original STAI form was constructed by Charles D. Spielberger, Richard L. Gorsuch, and Robert E. Lushene in 1964. The STAI has been adapted in more than 30 languages for cross-cultural research and clinical practice (Sesti, 2000). Various reliability and validity tests have been conducted on the STAI and have provided sufficient evidence that the STAI is an appropriate and adequate measure for studying anxiety in research and clinical settings (Sesti, 2000). McIntyre, McIntyre, and Silverio (in press) validated the STAI for Portuguese communities. Several items on the STAI were reversed coded (Items 1, 2, 5, 8, 11, 15, 16, 19, 20).

2. Nottingham Health Profile (NHP)

The Nottingham Health Profile is intended for primary health care, to provide a brief indication of a subject's perceived emotional, social and physical health problems. The instrument is used to evaluate perceived distress across various populations. It consists of two parts.

- (1) Part 1 contains 38 yes/no items in 6 dimensions: energy level (EL): 3, pain (P): 8, emotional reaction (ER): 9, sleep (S): 5, social isolation (SI): 5, physical abilities (PA): 8 (2). To obtain a final score in each dimension, and to overcome the fact of having a different number of items in some of the dimensions, each sum was multiplied by 100 and divided by the number of items in the dimension. Possible scores ranged from 0 (all answers of "no" in the dimension, denoting absence of distress) to 100 (all answers of "yes", denoting maximal distress).
- (2) Part 2 contains 7 general yes/no questions concerning daily living problems each question answered "Yes" or "No", important that all questions are answered. If the subject is not sure whether to say "yes" or "no" to a problem, s/he are instructed to answer the one more true at that time. The two parts may be used independently and part 2 is not analyzed in this study. We calculated scores for each NHP dimension in these studies by adding all the answers to the items in the dimension, giving the value of 0 for answers of "no" and 1 for answers of "yes". To obtain a final score in each dimension, and to overcome the fact of having a different number of items in some of the dimensions, each sum was multiplied by 100 and divided by the number of items in the dimension. Possible scores ranged from 0 (all answers of "no" in the dimension, denoting absence of distress) to 100 (all answers of "yes", denoting maximal distress).

Results

Mean age of the children with cerebral palsy in this study was 10.2 with a 6.5 standard deviation. There were 33.6 % girls, and 66.4 % boys in the children. The mean age of the mothers was 34.8 with a 7.8 standard deviation. Only 11.2 % mothers were employed (n= 12), 22.4 % of the mothers (n= 24) had one child, 49.5 % had two children (n= 53), and 30.1 % had three or more children (n= 30). 102 of the mothers had one disabled child and 5 of the mothers had two or more disabled children.

The demographic characteristics of the mothers were presented from Table 1 to Table 7.

Table 1: Age of the Respondents (N= 107)

S.N	Age (years)	Frequency	%
1.	22-39	81	75.6
2.	40-62	26	24.3
Total		107	100

The findings of the Table 1 present that most of the mothers (75.65) were in the early stage of adulthood and 24.3% mothers were in the middle stage of adulthood. In her study Nisha et al also found that most of the mothers of cerebral palsy children were in early adulthood period (Age group 20-40 years (Nisha et al, 2014).

Table 2: Level of Education of the Respondents

S.N	Level of Education	Frequency	%
1.	Up to Intermediate	41	38.3
2.	Graduate	46	43.0
3.	Postgraduate	20	18.7
Total		107	100

The findings of the Table 2 present that most of the mothers were graduate (43%), 38.3% mothers' education was up to intermediate, and only 18.7% mothers were postgraduate. This finding is also consistent with the findings of Nisha et al 2014.

Table 3: Income of the Respondents

S.N	Income	Frequency	%
1.	Low	20	18.7
2.	Middle- High	87	81.3
Total		107	100

The findings of the Table 3 present that most of the mothers had an enough level of income (81.3%) and only 18.7% mothers had reported low income.

Table 4: Scores of STAI

Variables	Mean	SD	Median	IQR*
SAI	41.95	6.55	42.0	39.0- 46.0
TAI	47.27	7.94	47.0	41.0- 53.0

*Inter- quartile range

The findings of the Table 4 present that the mean score was 41.95 (SD = 6.55) for SAI and 47.27 (SD = 7.94) for TAI. These results represent especially higher trait anxiety in the mothers. This finding is

consistent with Tripathi, 2015, which indicates that high levels of distress have been found in up to 70% of mothers and 40% of fathers of severely disabled autistic children.

Table 5: Scores of Nottingham Health Profile (NHP)

NHP	Mean	SD	Median	IQR*
Sleep	26.91	25.78	20.0	0.0- 40.0
Physical Abilities	19.62	17.35	12.5	0.0- 37.5
Energy Level	40.59	38.75	33.33	0.0- 66.66
Social Isolation	24.3	29.72	20.0	00- 40.0
Emotional Reaction	34.87	30.94	33.33	0.0- 55.55
Pain	22.75	29.06	12.5 0	.0- 37.5

*Inter- quartile range

The findings of the Table 5 presents that highest mean score in NHP was Energy Level with 40.59 (SD = 38.75) and then Emotional Reaction with 34.87 (SD = 30.94). The other sections were sleep with 26.91 (SD = 25.78), SI with 24.3 (SD = 29.72), pain with 22.75 (SD = 29.06) and Physical Abilities with 19.62 (SD = 17.35). This finding is also consistent with the findings of the study conducted by Tripathi & Punetha (2005), which suggest that most of the mothers with disabled children had reported high anxiety as most of the mothers perceived their daughters disability as a shocking experience, which indicates their negative perception.

Table 6: Correlations between STAI and NHP

Variables	SAI	TAI	Sleep	PA	EL	SI	ER	Pain
SAI	1							
TAI	-.029	1						
Sleep	.115	.252**	1					
Physical Abilities	-.008	.156	.237*	1				
Energy Level	-.098	.206*	.176	.583**	1			
Social Isolation	-.088	.147	.424**	.333**	.344**	1		
Emotional Reaction	-.064	.271**	.428**	.438**	.573**	.637**	1	
Pain	-.009	.163	.296**	.622**	.431**	.260**	.343**	1

* $p < 0.05$ ** $p < 0.01$

The findings of the Table 6 indicate that SAI was not correlated with TAI and the other dimensions of NHP. TAI was positively correlated with sleep ($r = 0.252$) and Emotional Reaction ($r = 0.271$) at 0.01 level and with Energy Level ($r = 0.206$) at 0.05 level. Between NHP dimensions, almost every dimension was positively correlated with each other. Sleep was correlated with Social Isolation ($r = 0.424$), ER ($r = 0.428$) and pain ($r = 0.296$) at 0.01 level, and with Physical Abilities at 0.05 level. There were significant correlations between Physical Abilities and Energy Level ($r = 0.583$), Social Isolation ($r = 0.333$), ER ($r = 0.438$) and pain ($r = 0.622$) at 0.01 level. Energy Level was correlated with Social Isolation ($r = 0.344$), ER ($r = 0.573$) and pain ($r = 0.431$) at 0.01 level.

= 0.573) and pain ($r = 0.431$) at 0.01 level. Social Isolation was significantly correlated with Emotional Reaction ($r = 0.637$) and pain ($r = 0.260$) at 0.01 level. There was a relation between Emotional Reaction and pain ($r = 0.343$) significant at 0.01 level. It was also found that mothers' educational level were negatively correlated with TAI ($r = -0.209$) and pain ($r = -0.240$) at 0.05 level. Between SAI and number of children that a mother has, there was a positive correlation ($r = 0.399$) significant at 0.05 level. There was no relationship between children's age and anxiety and quality of life of mothers.

Discussion

The findings of the study reveal that most of the mothers (graduate 43% & 18.7%) postgraduate was highly qualified, which shows that there is no effect of mothers' education on the disability in the child. This finding is also consistent with the findings of Nisha et al 2014, where they also found that most of the mothers of children with cerebral palsy had good qualification.

The findings of this study indicated that mothers with cerebral palsy children reported high anxiety and low quality of life. This finding is consistent with the findings of Nisha et al (2014) which suggests that most of the mothers having a child with cerebral palsy are either in the risk of developing depressive symptoms or suffering from depressive symptoms. The mean score for total stress, (92.9) was found to be above the normative value and is above normative range (90), which suggests that according to the norms of the PSI-SF, mother's level of stress is in the clinical range (Nisha et al, 2014).

Anxiety affects negatively quality of life of mothers. These findings suggest that highly stressed mothers are less effective in expressing their feelings, enjoyment, warmth, and are less inventive and less accepting to the actions of their children during their interaction, than the mothers who experience low levels of stress (Nisha et al, 2014) This finding is also consistent with the findings of the study conducted by Tripathi & Punetha (2005), which suggest that most of the mothers with disabled children had reported high anxiety as most of the mothers perceived their daughters disability as a shocking experience, which indicates their negative perception.

Although TAI scores were higher, SAI scores were not significant for anxiety. These results represent especially higher trait anxiety in the mothers. This finding is consistent with Tripathi, 2015, which indicates that high levels of distress have been found in up to 70% of mothers and 40% of fathers of severely disabled autistic children.

This situation made us think that mothers of disabled children accept living with disabled children in life time. In their research work, Tripathi & Punetha (2005) also found that mothers had accepted the disability of their daughters as it was a reflection of their past deeds, god's will etc. Finally, trait anxiety exists in this population.

Giving birth to and bringing up a child with a mental or physical handicap may give rise shock and denial, guilt, sorrow and helplessness occur in times (Tripathi, 2015, Nishi & Punetha, 2005 & Nisha et al, 2014). Spending more time with disabled children anxiety exists in all family members (Tripathi, 2015). Because of mothers' dominant roles in care giving and responsibilities at household, trait anxiety levels were higher in mothers in present study. This trait anxiety affects negatively quality of life.

The findings of the study also showed that decreased energy level and sleep disturbance accompanied with increased emotional reactions in mothers with trait anxiety (tripathi & Punetha, 2005).

In the present study, a significant correlation was found between trait anxiety scores and quality of life dimensions, which highly supports the Baker et al. (2000) found dense anxiety and higher level of depression in mothers of children with severe behavioral problems. Manne et al. (2001) also showed that high level of correlation between depression and anxiety level in mothers of children undergoing bone marrow transplant. In case of increased anxiety scores, we found increased emotional reactions in mothers. Similarly, Baker found higher scores both of emotional scores and depression scores in mothers of child with severe behavioral problems (Baker et al., 2000). In present study, we found significant correlation between TAI and social isolation in mothers (Nishi & Punetha, 2005). Depend on over responsibilities in daily life mothers don't have enough time for social activities. Barnett showed that both parents of a child with Down syndrome devoted more time to child care and spend less time in social activities (Tripathi, 2015, Nishi & Punetha, 2005 & Nisha et al, 2014). Mothers of children with Down syndrome allocated less time to paid employment (30).

Consequently, low level of income suggests low level of quality of life. In contrast to this, Nishi & Punetha, 2005 & Nisha et al, 2014 explained that mothers' hobbies change because of the child increased their role strain and directly affects their quality of life. The findings also revealed variables such as distress, hopelessness and financial situation were more important in explaining the reduced stress and quality of life than parental gender and the severity of the disability (Nishi & Punetha, 2005). Based on these findings, it can be said that Severity of disability, age and gender of the child, social and financial conditions are identified as factors that affect quality of life in most of the studies (Nishi & Punetha, 2005 & Nisha et al, 2014).

No relationship was found between anxiety, quality of life and child's age. Similarly, Warschburger et al. (2004) showed that neither the child's gender nor the age had affected the quality of life in mothers of children with atopic dermatitis, but severity of disease affected quality of life in mothers (Nisha et al, 2014).

The findings of the study also reflect that Quality of life levels decreases while child is growing up. Nishi & Punetha (2005) showed that mothers' educational level did significantly affect maternal stress symptoms. Similarly, the present research also showed that mothers with lower educational level had highest trait anxiety and pain dimension of NHP. Wallander et al (1990) showed that limitations on mothers' roles occur when having a child with physical disability. However, sleep disturbance was seen when high stress was reported by the mothers (Nishi & Punetha, 2005). The findings of this study indicated that mothers with disabled children have reported high level of anxiety. Increased anxiety level affected with badly in mothers quality of life. The study suggests the need of effective rehabilitation programs followed by proper counselling and care which offer not only information on the children's disabilities but also psychological support for the mothers.

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