



ASSOCIATION OF CEREBRAL PALSY CHILD BEHAVIOR WITH CAREGIVER STRESS LEVEL

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ABSTRACT

Background: Cerebral palsy is the most common frequent disability of childhood. Its prevalence in Pakistan is much higher about 2 to 3 out of every 1000 children with CP, which affect the child's functional status of life to a greater extent.

Objective: To determine the association of the Cerebral palsy child's behavior with caregiver's stress level.

Materials and Methods: This was cross sectional study comprised of 159 caregivers of CP child among them 100 were males and 59 were females. This study conducted from December 2016 to May 2017. Convenience sampling technique was used and subjects were selected from different hospitals and rehabilitation centers of Lahore Pakistan on the basis of inclusion and exclusion criteria after taking informed consent. The two standardized "Parental stress scale" and "strength difficulty questionnaire" were used to find out the level of stress and caregiver' burden. The Data was analyzed using SPSS v20. Frequency was calculated to obtain mean values of caregiver stress and behavior of CP child using PSS and SDQ. P value $\leq .05$ was considered statistically significant.

Results: The Pearson correlation (r) between PSS and SDQ data was $r = 0.63$ which showed there was a strong positive linear correlation present between our two variables CP child behavior & caregiver stress level. It indicated that both variables increased or decreased together.

Conclusion: The quality of life of the parents of CP child is influenced by their child behavior. The study concluded that there is strong relationship present between the CP child's behaviors with the caregiver's stress level.

Key Words: Cerebral palsy, Parental Stress Scale, Strength Difficulty Questionnaire

INTRODUCTION

In childhood the most frequent disability disorder is cerebral palsy in which motor impairments occur due to

lesion in brain during early development.(1-3) This disorder of movement abnormalities in posture cause activity constraint that credited to the nonprogressive disturbances occurs during development of child's brain. In CP patients with motor abnormality are often accompany by the disturbance of communication, behavioral disorder, sensation, perception, and cognition.(4-6)

The occurrence of cerebral palsy ranges from 1.4 to 4 per 1000 live births. Mother as the primary caregiver of CP child has more depression and stress as compared to other mothers of normal children.(7-9)

Giving care to the children with motor functional limitation is the basic right of being parents. One of the major challenges that caregivers are facing is to handle their child's health problems and also their requirements of daily living at home.(10-12)

The family issues in CP child are financial burdens like out-of-pocket cost and members who stop doing jobs. It also affects their health and daily activities like jobs etc and they need additional income for medical and personal expenses of CP child.(2, 13, 14)

It is a difficult task for caregivers to accomplish physical and psychological emotional demands of CP patients, and it also changes the social life of caregivers. The caregivers face financial, physical, psychological, and emotional stressors. It may be due to low quality of care.(15, 16)

Caregivers of cerebral palsy child's often experience behavioral difficulties and limitation in functional skills. The main purpose of this study is to discover the relation between aspects of parental distress in the parental task due to cerebral palsy child behavioral issues .(17, 18)

The perception of the caregiver or parents of CP child is related to factors like occupation, education, and number of children resources. All these mentioned factors have a role in developing perception related to CP child's care .(19, 20)

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Sardana, et al 2016 conducted a descriptive study in physical medicine and rehabilitation department New Delhi India. They collected data from 65 caregivers of CP patients through Questionnaires about physical and

Gender	Frequency (n=159)	Percent
Male	100	62.9
Female	59	37.1
Age		
Minimum	Maximum	Mean ±SD
4	13	6.51±2.56

mental health from family burden scale. For data analysis multiple regressions and descriptive statistics were also used. At the end of study they found both mental and physical health were affected and their three domains like 1) family activities, 2) family leisure 3) family interaction were also found to be disrupted in caregivers of Cerebral Palsy patients .(21, 22)

In 2014, Syed ali hussaini et al conducted a cross sectional study in which data was collected from 424 Irani,s mothers of cerebral palsy patients. They assessed the association of quality of life in primary caregivers. The data were collected from different rehabilitation centers. The results showed that the caregiver of CP patients specially mother suffer from poor physical and mental health.(23, 24)

Kumar, et al in 2013 conducted a cross sectional study. Data was collected through (SSDS), a tool to identify for mother depression from Neurology OPD, Karachi and Rehabilitation Centre DUHS Karachi. They collected data from 81 mothers of the CP children. Out of 40 primary caregivers (mother) with depression. Among them 30% got mild depression, 60% moderate and 10% severe depression.(7)

MATERIAL AND METHODS

Study design was cross- sectional study. Data was collected from the physical therapy department of Children’s hospital, Gulab Devi hospital Lahore, PSRD, and Social Security hospital ferozpur road, Lahore. Data was collected from the Caregivers of cerebral palsy children. This study was completed in three months after the approval of synopsis. Nonprobability convenient sampling technique was used. Sample size was 196, after calculation from “Raosoft”. Caregivers (Mother or father or any relation) who spend minimum 6 to 1 hours with CP child were included in this study. Caregivers with diagnosed chronic illness and caregivers who were not

willing to participate were excluded from this study. Data was collected from caregivers of CP children after getting permission from ethical review board committee of the concerned organization. Informed consent was taken from the caregivers of CP children. Data was collected with the help of PSS and SDQ Scale. The questionnaire was fully explained by researcher to caregivers. The collected data was analyzed through SPSS version 20.

RESULTS

Out of sample 159, mean age of the CP child was 6.51(2.56) Table 2

Table 1 Descriptives

Out of sample 159, male 100 (frequency, 100 percent, 62.9) and female 59 (frequency 59 percent 37.1) of CP child.

Table 2: Correlation of parental stress and behavior of child / (Strength difficulty questionnaire)

	R	P –value
Parental stress scale and Strength difficulty scale	0.631	.000
	0.631	.000

There is a strong positive significant correlation was found between parental stress scale and strength difficulties questionnaire because (P value .000, r value .631)

DISCUSSION

In childhood the most frequent disability disorder is cerebral palsy in which motor impairments occur due to lesion in brain during early development.(1) The aim of this research is to determine the association of CP child with caregiver stress level. To determine the effects of CP child’s behavior with the health status of his/ her caregivers like (Mother or father) any other relation it is necessary to spends a minimum of 6 to 10 hours with the cerebral palsy child.

By coping with the behavioral issues of cerebral palsy children caregiver stress can be reduced which ultimately improve the social life and occupational status of the care giver.

The psychological changes of CP child cause mental and physical stress in their caregiver. The previous studies were focused on the behavior of CP caregivers and distress but this study determined the association of CP child’s behavior on caregivers’ health status.

Our results of this study proved the alternate hypothesis which says that there are significant affects presents on the parental health status with the CP child behavior. This was supported by results from many other studies.



A previous study in 2004 designed to compare the health of caregivers of CP children with others general population caregivers based on physical and psychological health status.

It was proved that caregivers of CP children had less income as compared to others general population of caregivers.⁽²⁵⁾ This study also showed the same results that the CP child has a financial burden for caregivers. Another descriptive study in New Delhi India 2016 conducted in which they found both mental and physical health were affected and their three domains e.g. family activities, family leisure and family interaction were also found to be disrupted in caregivers of Cerebral Palsy patients.⁽²¹⁾ This study also showed the 4 Domains of SDQ somewhat affected on the caregiver health status. These were the findings which relate with our results but some studies also against in this regard. Recent study was differing from other similar studies because of the use of observation tools and amount of study population.

The existing significant finding showed that the health of the parents is much affected by the behavior of their CP child. The parents were facing many problems regarding their child and this thing made them guilty that their stress reason was due to their child.

CONCLUSION

The quality of life of the parents of CP child is influenced by their child behavior. The study concluded that there is strong relationship present between the CP child's behaviors with the caregiver's stress level. So, we can say that parent's life much affected due to their CP child's behavior.

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