ORIGINAL RESEARCH PAPER

Volume-7 | Issue-6 | June-2018 | PRINT ISSN No 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

DEPRESSION IN MOTHERS OF CEREBRAL PALSY CHILDREN AND ITS CORRELATION WITH AGE ,EDUCATION,INCOME,AND SEVERITY TYPE.

Occupational Therapy

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ABSTRACT

Introduction: Children with cerebral palsy suffer from several problems like impaired gross motor development, balance, locomotion, sensory integration dysfunction. So family especially the mothers undertake a lot of stresses & social and emotional difficulties.

Aims And Objective: To evaluate depression in mothers of children with cerebral palsy,and to evaluate the influence of different factors (age,education,income,level of severity)on depression.

Material And Methods: 110 mothers of children with CP coming to occupational therapy assessed with BDI-II measuring severity of depression and GMFCS to evaluate the level of severity of disability of the child .Information about the age,education ,and income of mothers of the CP children was also obtained. Data was analyzed by calculating mean and standard deviation.

Results: There is no correlation of depression with age,level of severity and income of family,however correlation exists between the education and depression in mothers of CP children.

Conclusion: our study has showed prevalent depression in mothers of children with CP and depression is an independent variable.

KEYWORDS

INTRODUCTION

Disability in a child affects not only the child's life but also the family's life. (Beresford, 1994; Mc Conachie, 1991)(1,2) Everyday problems in caring for a child with disabilities eg, sleep & behavioral difficulties has significant impact on maternal stress levels(Turner, 1993) ,Wallander & Varni has suggested that stress of dealing with a chronic illness is primary risk factor for development of psychological problems3.

Cerebral Palsy describes a group of permanent disorders of the development of movement and postures causing activity limitation that are attributed non-progressive disturbances that occurred in the developing fetal or infant brain. The motor disorders of cerebral palsy are often accompanied by disturbances of sensation ,perception cognition, communication, and behavior by epilepsy and by secondary musculoskeletal problems4.The overall prevalence of cerebral palsy is between 1.5 and 2.0 cases per 1000 live birth5.

The birth of a child with cerebral palsy places the family in dementia. Society views parenthood positively,but it views the birth of a disabled child negatively6.As in children with disabilities mother is an integral part of team working to improve child health .They force a lot of social and emotional problems7.

Singer 2006 stated that 6% -24% mother of disabled children scored above clinical cutoffs for depression. Maternal adjustment to the strain of caring for a child with disability seems span wide range from psychological distress to successful adaptation8.

J Aaron eta l (2012),in a study on depression among parents of children with disabilities revealed that threat appraisals, poorer physical health and lower family satisfaction were uniquely associated with depression status with 83.3% accuracy9.

Ones K 2005, in a study on assessment of Quality of life of mothers of children with cerebral palsy((primary caregivers)concluded that BDI scores were poorer in Mothers of children with cerebral palsy compared to those of control group10. Numerous studies are available, highlighting the depression among parents of Cerebral Palsy children and disabled children. Literature suggests studies have been conducted in various parts of the world including India, However the results Cannot be generalized. No such study have been found in eastern India. The aim of this study was to investigate the association between the BDI and the different variables (Age,GMFCS,education and monthly income).

Methodology:

The total sample consisted of 100 mothers of cerebral palsy children recruited from the Occupational Therapy department ,NILD.The severity of disability was assessed by GMFCS. Most of the participants were mothers ranging from 27 to 68 years .Child ages were normally distributed with the majority of the participants children falling between ages 5 and 11 (n=48),11-16(n=39) and 7-21(n=13).The children were diagnosed with cerebral palsy ,including different types spastic, ataxic and mixed type. Some children were intellectual disabled and with multiple disabilities.

The study was performed in the Department of Occupational Therapy, NILD from june 2017 to November 2017.

Procedure:

Written informed consent was obtained from all eligible mothers who were willing to participate in this study. Demographic data, medical and developmental histories of children with cerebral palsy were obtained and additional data ,such as clinical types, involvement of extremities and concomitant problems of children with cerebral palsy were mainly determined via GMFCS.As well as socio demographic features in mothers of children with cerebral palsy,levels of depression were evaluated with Becks depression inventory.The variables ,age,severity of disability,education,monthly income. were recorded.

The inclusion criteria was having a child with cerebral palsy, without pregnancy and chronic diseases. The exclusion criteria was if the mother had a Psychologic disorder.

Classification of data:

The data was classified according to the different variables viz,age,severity of disability,educationa monthly income.The educational level of mothers was characterized into three groups as follows,low education level-upto class 9,middle education group-class 10 to Bachelor degree,High education group-Post graduation and professional degree. Monthly income was categorized into three groups of low income,middle income,and high income group based on monthly incomes.The mothers of the children are grouped into the younger group in which the age is less than 35 years,middle group where the age ranges between 36-50 years and older group where the age is more than 50 years The

RESULT

100 mothers of cerebral palsy children were included in the study.Demographic data was taken which included the name

,age,address of the mother of cerebral palsy children and diagnosis of the children.To score the depression in mothers of cerebral palsy children Beck Depression Inventory (BDI) was used. statistical analysis was done using the SPSS software 21.The correlational analysis was done.

The study aimed at finding the relationship between
Depression of mothers of cerebral palsy children and age of mothers,

Depression of mothers of cerebral palsy children and GMFCS level of cerebral palsy children,

Depression of mothers of cerebral palsy children and education of mothers

Depression of mothers of cerebral palsy children and monthly income of family

Table 1 shows the descriptive statistics of the variables(mothers age,monthly income and BDI).

Table 1
DESCRIPTIVE STATISTICS

SL.NO.	VARIABLES	N	RANGE	MINIMUM	MAXIMUM	MEAN		STD.DEVIATION	VARIANCE
						STATISTICS	STD. ERROR		
1	MOTHERS AGE	100	34	17	51	26.22	.528	5.279	27.87
2	MONTHLY INCOME	100	59000	1000	60000	8786	955.55	9555.558	91308690.91
3	BDI	100	36	1	37	12.95	.769	7.693	59.179

To find out the correlation between depression of mothers of cerebral palsy children(BDI) and age of mothers (AGE)pearson correlation was used.

Table 2: Correlation between depression of mothers of cerebral palsy children(BDI) and age of mothers (AGE)

variables	mean	standard deviation
BDI	13.53	7.97
AGE OF MOTHERS	1.12	.356

correlation	R value	P value
BDI & AGE	.120	.234

P<0.05 BDI-Beck Depression Inventory

There is insignificant relationship between depression of mothers of cerebral palsy children and age of mothers.

To find out the correlation between depression of mothers of cerebral palsy children(BDI) and GMFCS level of cerebral palsy children (GMFCS) spearman correlation was used.

Table 3: Correlation between depression of mothers of cerebral palsy children(BDI) and GMFCS level of cerebral palsy children(GMFCS)

variables	mean	standard deviation
BDI	2.93	1.166
GMFCS	13.70	6.537

correlation	R value	P value
BDI & GMFCS	-.026	.798

P<0.05 GMFCS-Gross motor function classification system

There is insignificant correlation between depression of mothers of cerebral palsy children(BDI) and GMFCS level of cerebral palsy children(GMFCS).

To find out the correlation between depression of mothers of cerebral palsy children(BDI) and education of mothers spearsman correlation was used.

Table 4: Correlation between depression of mothers of cerebral palsy children(BDI) and education of mothers

Variables	Mean	standard deviation
BDI	14.42	8.38
LOW EDUCATION	5.76	1.75
BDI	13.87	8.44
MIDDLE EDUCATION	11.08	1.43
BDI	6.20	7.43
HIGH EDUCATION	15.00	.000

Correlation	R value	P value
BDI & LOW EDUCATION	-.048	.729
BDI & MIDDLE EDUCATION	-.091	.578
BDI AND HIGH EDUCATION	.00	.00

P<0.05

The r value shows insignificant relation in low and middle education group but significant relation between high education and BDI.

To find out the correlation between depression of mothers of cerebral palsy children(BDI) and monthly income of family pearson correlation was used.

Table 5: Correlation between depression of mothers of cerebral palsy children(BDI) and monthly income of family

Variables	Mean	standard deviation
BDI	10.05	8.45
LOW INCOME	4762.32	2007.49
BDI	10.80	8.63
MIDDLE INCOME	13800	3860.73
BDI	7.91	10.63
HIGH INCOME	36545.45	10191.79

Correlation	R value	P value
BDI & LOW INCOME	-.144	.235
BDI & MIDDLE INCOME	-.080	.738
BDI AND HIGH INCOME	-.141	.680

P<0.05

The analysis suggest that there is insignificant correlation between monthly income of family and BDI.

Discussion:

Results of study suggestive of depression in mothers of children with CP & affected by the variables age,monthly income,education,severity of disability. Most important thing in Indian family characteristic is that the father is playing role as an earner so all responsibility of caring for child is on mothe11 .

Rashida B. et al[2010] showed mothers of children with CP suffers from more psychological distress than mothers of normal children which is also supporting our study results12.

The correlation between depression and age was insignificant(p =.234). Our results are similar to the findings of a study byHalim Yilmaz etal ,they found no correlation between depression anxiety levels and body involvement of CP,education status, age and econonomic level among patients13.

The correlation between depression of mothers of cerebral palsy children and severity of disability was insignificant(p=.798).

There is a insignificant correlation between severity of disability in our study.The results are corroborated by Firoozeh SajediSajedi et al [2009] they had studied mothers of children with cerebral palsy and found higher prevalence and severe depression in mothers of CP. The study found there is no statistically significant difference in depression score and severity of disability14. Similarly, Lambrenos et al. found depression levels to be higher in mothers of children with CP than those with healthy children, but reported that no correlation was present between depression and disability levels15. In another study by Smith et al., no significant correlation was reported between depressive symptoms observed in mothers of children with CP and developmental status of children.16.while some studies reports that no correlation is present between depression and/or anxiety levels of mothers of children with CP, and level of functional disabilities in children 17, 18 others report that a correlation is present between such factors19, 20.

The correlation between between cerebral palsy mothers and low education group was found to be insignificant(p=.729),and also insignificant correlation between mothers of children with cerebral palsy and middle education group(p=.578). However there is a significant correlation between depression in mothers of cerebral palsy children and high income .

Our results are similar to the findings of a study byHalim Yilmaz etal ,they found no correlationwas detected between depression anxiety levels and body involvement of CP,education status, age and econonomic level among patients13. Vanza, however, reported that children`s main movement ability had no significant relationship with their mothers depression and quality of life in cerebral palsy group (8). Ones K, Yilmaz E, Cetinkaya B, Caglar N. Assessment of the quality of life of mothers of children with cerebral palsy (primary caregivers). Neurorehabilitation and Neural Repair. 2005;19(3):232.

Disabled children may be perceived as a significant disappointment in the family and constitute an intensive source of anxiety21. Parents speak out: views from other side of the two-way mirror. New York: Merill; 1978.In addition, disabled children with limited daily activities undermine infamilial dynamics, lead to changes in the roles of family members, and family members have to undertake different responsibilities related to CP children's care. Such responsibilities appearing with disabled children are among the reasons of stress, anxiety and depression in families22.

Our study, despite its large number of participants, has some limitations. Firstly, the inclusion of only mothers of children with CP may be considered a limitation as the study did not include healthy children. Secondly, our findings cannot be generalized to the women populations in other countries.

Our findings indicate that depressive symptoms are frequently encountered in mothers of children with CP, and such symptoms are not related to severity of disability in children with CP,the age of mother,income of family and education of mother,. So, healthcare professionals following-up CP children should consider that mothers of CP children may have higher levels of depression. Further studies should also assess the psychology of other family members, along with mothers and determine supportive strategies for all family members.

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