

Depression and Coping Strategies amongst Mothers of Children with Cerebral Palsy

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Children with cerebral palsy face multiple disabilities throughout their lives. So, the families, especially the mothers go through many physical, mental and social health issues due to which cognitive abilities and coping skills of those mothers are affected. The purpose of this study was to determine the level of depression and coping strategies amongst mothers of children with cerebral palsy (CP) and to suggest proper intervention plan to achieve mental health of those mothers. In order to take care of mothers, it is very important to investigate their mental health and coping skills so that they can be offered support in time and mental health of those mothers can be saved. A study was conducted involving total 30 mothers of children with CP aged 1-12 years, who had attended Paediatrics Department and Physical Medicine & Rehabilitation (PMR) of Indira Gandhi Institute of Medical Sciences, Patna. A Socio-demographic data sheet, Beck Depression Inventory-2 Hindi version (BDI-2) and Coping Strategy Scale were administered. BDI scores were found to be significantly high among mothers and were strongly correlated with the coping skills adopted by them.

Keywords: Depression, Coping Strategies, Mothers, Cerebral Palsy

In the event of any serious illness in the children, even the family members are not able to remain mentally healthy. Especially mothers are more prone to develop guilt feelings and other physical, mental and social health issues because of our family and social structure. Cerebral palsy is one of the most common motor disabilities among children. Recent survey says that 0.2% of children worldwide is suffering from cerebral palsy (Maryam et al., 2013, Nelson and Blair, 2015). Indian survey says that 3 children in every 1000 births have cerebral palsy. India being a developing country this number will be even higher (BMJ 2017; 356: j462). Children with cerebral palsy face multiple disabilities throughout their lives. They have developed trouble with gross and fine motor skills. They also suffer with balance control, tone of the muscles and their coordination. Along with these, such children may also suffer from epilepsy, sensory receptivity and cognitive limitations. In such a situation, these children have to be taken care for almost for whole life. The responsibilities of feeding, drinking, sitting and walking etc. of these children also fall on the shoulders of

family members especially on mothers. Due to the social obligations and structure of family existing in India, the responsibility of raising children in family almost falls on the mothers (Kujur, Bajpai, Sethy & Mallick, 2018). The mothers may develop certain health problems. Their problems become high when their children are found to be suffering from any disability. Responsibility of mothers towards caring of the children doubles and quadruples. One study reveals that mothers of children with cerebral palsy show more symptoms of depression than the mothers of normal children (Unsal-Delialioğlu et al., 2009). In that case mothers use many compensatory strategies to cope with the feeling of guilt and discomfort caused by their children's illness (Sajedi et al., 2010). In many cases, it has also been found that mothers of CP children who keep their child more in control and emotionally detached from them, those children are more likely to develop psychological problems which further exaggerate mother's health (McLeod et al., 2007a & 2007b). Onse et al., (2005) found in their study that the BDI scores were poorer among Mothers of children with CPs (MCCPs)

compared to control group. That study was conducted on 46 MCCPs and 46 mothers of healthy children. In another study by Sajedi et al., (2009) it was found a significant difference in depression score between group of mothers of children with CP and control group. Further Kumari R & Singh SP, (2013) found that the majority of mothers (34.6%) were with moderate level of coping in a study conducted on stress and coping to manage the problems of mothers in Amritsar. That study also finds a significant association between income of the parent, number of the children and level of coping. Jankowska et al., (2015) studied the variables along with coping among 27 mothers of children with cerebral palsy which reveals that mothers with cerebral palsy were predisposed to over protectiveness and were of demanding attitudes. The reason for this was attributed to neuroticism.

It is seen that such studies on the life-long needs of children with cerebral palsy and the psychological problems faced by their mothers are poorly studied in our country particularly in state of Bihar. We have to depend on the data of other countries for our knowledge which may not be suitable to our country because our culture is different. Therefore, the present study on Depression and Coping Strategies amongst Mothers of Children with Cerebral Palsy (CP) is very important so that the health of the mothers could be properly studied and provisions of their care could be suggested.

To study the severity of depression and coping strategies among mothers of children with cerebral palsy and to suggest right intervention strategies to achieve mental health of those mothers.

Objectives

1. To examine the severity of depression among mothers of children with cerebral palsy.
2. To find out the types of coping strategies used by those mothers of children with cerebral palsy.
3. To study the relationship between depression and coping strategies among mothers of children with cerebral palsy.

4. To suggest the possible interventions for those mothers.

Hypotheses

1. Label of depression will be clinically significant among mothers of children with cerebral palsy.
2. The types of coping strategies used by those mothers of children with cerebral palsy will be moderate.
3. Depression and coping strategies will be correlated among mothers of children with cerebral palsy.

Method

Sample

This study was conducted at Indira Gandhi Institute of Medical Sciences (IGIMS), Patna, Bihar. Mothers of children with CP who were visiting to the Department of Paediatrics and the Department of Physical Medicine & Rehabilitation (PMR) of this institution were the universe or population for this study. The unit of the study were the mothers of children with CP.

Though the incidence of CP in India is around 3 in 1000 live births but visits of children with CP in this Institute are less in number, and visit of mothers of these children is lesser. Given this statistics and COVID situations finding big sample size was difficult. So due to the rare unit of population of mothers of children with CP, the sample size of this study was 30. The mothers of children with CP, who were visiting IGIMS, Patna were the participant of this study. Mothers' age range were between 20-50 years. The age of children parented by those mothers were ranged from 1-12 years with all types and grades of CP. The participant were selected according to their suitability for the study and their willingness. Hence, purposive sampling was used in this study. This sampling was done at the convenience of the researcher and ability to answer the required questions by the mothers of children with CP for that following criteria were used to include as sample in this study:

Inclusion Criteria

- Children diagnosed as having CP by a pediatrician or physicist

- Mothers' age range between 20-50 years
- Children's (with CP) age range between 1-12 years
- Willing to participate in the study
- Attending IGIMS, Patna

Exclusion Criteria:

- Mothers having a chronic medical condition
- A history of divorce or recent relative's death
- History of chronic psychological disorder

Tools Used

Total three tools were required in this study. Firstly, Socio-demographic and Clinical data sheet were used to collect information regarding socio-demographics and clinical variables. Secondly, Beck Depression Inventory-II (BDI-II) was administered to assess the label of depression amongst the mothers of children with CP and lastly Coping Strategy Scale was administered to assess the types of coping strategies among mothers of children with CP.

Socio-demographic and Clinical data sheet-

A socio-demographic and clinical data sheet were used, it was self-designed interview schedule for the present study. Information contained in this tool were related to socio-demographic variables of the mothers of children with CP and their children such as age, education, SES, number of children, physical and mental support in child care, types and severity of cerebral palsy in children etc. and clinical history of any significant medical condition or chronic psychological disorder etc.

Beck Depression Inventory-II (Hindi Version)

This is a self-reporting instrument consisting of 21 items, used to measure depression. This test has been designed according to the symptoms of depression listed in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, 1994). Test-retest correlation .93 was significant

($P < .001$), shows high reliability of the test. The BDI-II was having .93 ($P < .001$) construct validity.

Coping Strategy Scales (CSS)

This tool was developed by Srivastava in 2001. It was an instrument for the assessment of various coping strategies. In our day-to-day life, we respond to the situations in some way or other. Some people actively deal with the situation; some avoid, while others psychologically adapt themselves to the situations. The present measure of coping strategies comprised 50 items, to be rated on five-point scale. There were five major categories of coping strategies consists of Behavioral- approach, Cognitive – approach and Cognitive – behavioral approach which were Active approach coping (Problem-focused coping) and Behavioral- Avoidance and Cognitive Avoidance which were Avoidance coping (Emotion-focused coping). Retest reliability of the scale was 0.92. Approach coping reliability and Avoidance coping reliability were 0.78 and 0.69 respectively. Validity of the scale obtained by r is for two sub-scales were found significant on .01 or .05 level.

Procedure

The study was conducted at Indira Gandhi Institute of Medical Science (IGIMS), Patna in Bihar. After obtaining permission from the respective officers of the institution, the paediatricians and psychiatrists of the institution were informed about the study and requested to allow the researcher to see the mothers of children with CP. After that all mothers were interviewed solely to know their suitability for the study according to the inclusion-exclusion criteria and willingness of participants to be the part of this study. They were assured about the confidentiality of their responses. Total 30 mothers aged 20-50 were taken up for the study. After taking an informed consent form signed from each mothers, they were asked to complete Socio-demographic and Clinical data sheet, BDI-II (Hindi Version) and Coping Strategies Scale respectively. After obtaining all information from each mothers the data were analysed (using SPSS-16) and interpreted statistically.

Results

Table 1. Level of Depression of Mothers of Children with Cerebral Palsy

Level of Depression	Total No. of Responses	%
Minimal	12	40.00
Mild	8	26.67
Moderate	5	16.67
Severe	5	16.67
Total	30	100.00

N=30

Discussion

The present study was conducted in order to see the level of depression and style of coping in mothers of children with cerebral palsy by using Beck Depression Inventory-II and Coping strategies Scale (Srivastava, 2001). This study was the need of the time because such studies on the population of India and especially Bihar have been negligible. Of the total 30 mothers 53.33% were between 26 and 35 years of age. There were 5 (16.67%) mothers who were completely illiterate. Most of the mothers 22 (73.34%) were educated and were completed

Table 2. Descriptive Analysis of Coping Strategies of Mothers of Children with Cerebral Palsy

Coping Strategies Variables	Level of Coping Strategies	Total No. of Responses	%	N
Behavioral- approach	Low	10	33.33	30
	Moderate	20	66.67	
	High	0	0.00	
Cognitive – approach	Low	10	33.33	30
	Moderate	19	63.33	
	High	1	3.33	
Cognitive – behavioral approach	Low	4	13.33	30
	Moderate	17	56.67	
	High	9	30.00	
Behavioral- Avoidance	Low	28	93.33	30
	Moderate	2	6.67	
	High	0	0.00	
Cognitive- Avoidance	Low	18	60.00	30
	Moderate	12	40.00	
	High	0	0.00	

Table 3. Descriptive Analysis of Level of Depression and Coping Strategies of Mothers of Children with Cerebral Palsy

Variables	N	Mean	SD	Minimum	Maximum
Level of Depression	30	17.27	13.20	0	56
Approach- Behavioural	30	31.07	7.34	15	44
Approach- Cognitive	30	12.97	4.17	3	19
Approach- Cognitive-Behavioural	30	21.23	5.18	3	28
Avoidant- Behavioural	30	16.67	7.85	6	35
Avoidant- Cognitive	30	12.70	4.03	5	21

Table 4. Correlation between Depression and Coping strategies (Correlation Matrix) of Mothers of Children with Cerebral Palsy [Pearson Correlation Coefficients, N = 30]

Approach Behavioural	1					
Approach Cognitive	0.52931	1				
Approach Cognitive Behavioural	0.42521	0.53187	1			
Avoidant Behavioural	0.43859	0.00175	-0.29925	1		
Avoidant Cognitive	0.3484	0.0158	0.23005	0.51818	1	
Level of Depression	0.22836**	-0.26530**	-0.24265**	0.34373**	0.51019**	1
	Approach Behavioural	Approach Cognitive	Approach Cognitive Behavioural	Avoidant Behavioural	Avoidant Cognitive	Level of Depression

** Correlation is significant at the 0.01 level (2-tailed)

their 12th and above. Husbands' occupation were mostly in private jobs (40%) or self-employed (30%). Household income of 15 (50%) houses was more than 15 thousands per month, whereas a total of 14 (46.66%) households were between 5 to 15 thousands. Most mothers had only one (40%) or two (40%) children and belong to joint family 19 (63.33%). Most of the mothers had physical (76.67%) and mental support (70%). However, at the time of the interview, most of the mothers told that the support they get from the maternal side is not as much from the in-laws' side. Minor difference was noticed in the gender of the children. Of the total children, 14 (46.67%) were boys and 16 (53.33%) were girls. About 20 (66.66%) of children were up to the age of 4 years.

Table no. 1 is showing level of depression of mothers of children with cerebral palsy. Based on previous researches, we believe that mothers of children with cerebral palsy are more likely to develop depression. In the current study, 18 (60.01%) mothers were clinically depressed, which was a very large number. In which mild depression was found among 8 (26.67%) mothers, moderate among 5 (16.67%) mothers and severe depression among 5 (16.67%) mothers. Findings of a study supported our results which say depression and anxiety are both very common mental illnesses in mothers whose children suffer from some neuro developmental disorders (Fatima et al., 2021). In

another study, it has been told that depression is very common in those mothers whose children had cerebral palsy and the depression of those mothers also affects negatively on physical health of CP children (Bhat and Charoo, 2020).

Table-2 is showing descriptive analysis of coping strategies of mothers of children with CP. Results are showing that Behavioural-Approach Coping Strategy was used by mothers mostly at moderate level by 20 (66.67%) mothers which indicates most of the mothers were able to confronting, planning, taking impulsive decisions for their children. They were also seeking social support and negotiate the situation. But other mothers by 10 (33.33%) were showing low score on this sub scale which indicates some mothers were fail to plan and were not able to take right decisions for their children. They were also lacking self-control and suppressing competing activities which really tells how difficult it is to handle the responsibility of a cerebral palsy child. Cognitive approach coping strategies were also used moderately by majority of the mothers (63.33%). Those mothers were intellectualizing, reinterpreting the situation in a positive way and were seeking social support whenever needed but some of the mothers (33.33%) were interpreting the situation negatively, were weak in cognitive reappraisal and fell behind in seeking social support for their emotional needs when they needed. A study conducted by Jankowska et al., (2015) supported our study as it found that

most of the mothers of children with CP using coping strategies were Planning, Active Coping, Positive Reinterpretation and Instrumental social support. Most of the mothers (9 High & 17 Moderate) had learned to accept the situation. The reason for this can be told that the process of their adaptation has already been done since they started coming to the hospital and talking to the doctors. Because many of those mothers were receiving services from the hospital since a long time, very few mothers (6.67%) were seen who used the Behavioral-Avoidance coping strategies on lower side. This means that mothers knew how to act with restraint and avoid escaping, behavioural disengagement; withdrawal and feeling helpless but 40% of mothers used cognitive avoidance strategies more. It shows they rationalized situation more, creating distance from the people and society more. Other 18 (60.00%) mothers show good balance in this regard. Most of the mothers in our study had the ability to cope with the situation. This may be because most of the mothers in our research were educated and had received social and psychological support from their family members and society in a good amount. Most of the mothers' husbands were employed and also used to earn about 10 to 20 thousands per month. Result of a study supports this which was conducted by John and Roblyer in 2017 on 47 mothers of children with intellectual disability finds support from family and society gives them strength to face difficulties.

Table-3 shows descriptive analysis of level of depression and different coping strategies used by the mothers of children with CP. The mean of level of depression was 17.27 (SD=13.20) which indicated that the average mother has Mild level of Depression. On the first sub scale of coping strategies (approach- behavioural), mean was 31.07 (SD=7.34) which suggested Moderate use of this coping style in mothers of CP children, likewise second (approach-cognitive) scale was having mean of 12.97 (SD=4.17) suggested moderate use, third (approach- cognitive-behavioural) and fourth (avoidant- behavioural) were having mean of 21.23 (SD=5.18) and 16.67 (SD=7.85) suggested Moderate and Low use of these coping strategies respectively. The last sub scale (avoidant-cognitive) of the coping strategies was showing mean of 12.70

(SD=4.03) which again suggested Low use of this coping style.

Table-4 is suggesting correlation between Depression and Coping Strategies (Correlation Matrix) of Mothers of Children with Cerebral Palsy. The matrix showed positive correlation between Depression and Behavioural Approach Coping Strategies (0.22836**), Depression and Behavioural Avoidant Coping Strategies (0.34373**) and Depression and Cognitive Avoidance Behavioral Strategies (0.51019**). This infers that as depression increases, the use of all these three coping styles also increases and vice-versa. On the other hand, matrix also shows negative correlation between Depression and Cognitive Approach Coping Strategies (-0.26530**) as well as Depression and Cognitive Behavioural Approach Coping Strategies (-0.24265**) that indicates that the use of all these coping styles will decrease with the increase of level of depression and the use of all these coping styles will increase with the decrease of level of depression. All correlations were found to be significant at the 0.01 level.

Conclusion

As per the findings of this research, we can say that most of the mothers of children with cerebral palsy were suffering from depression. It also suggests that some of those mothers had a poorer tendency toward coping strategies which should be taken care of at the earliest and they should get proper counselling. According to the results of the research, the mothers of every child who comes to medical care should also be screened and the right strategies should be planned for treatment. So that their strength to face difficulties can increase and which contribute to more successful family adaptation.

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Acknowledgements : Authors would like to sincerely thank to the various officers and staff of the Indira Gandhi Institute of Medical Sciences, Patna for allowing us to conduct this research. We render out thanks to Dr. Jayant Prakash (Professor & Head), Department of Paediatrics and Dr Raj Kumar (Associate Professor & Head), Department of Physical Medicine and Rehabilitation both from IGIMS, Patna and their team whose continuous cooperation made this research successful. Gratefully acknowledged to Prof J M Deo (Professor, Department of Psychology, Patliputra University, Patna) for his constant support. Thanks are due to Dr Rajeev Kumar (Visiting Professor, Ramakrishna Mission Vivekananda University, Ranchi) for his valuable suggestions. Authors would also like to express their heartfelt thanks to all the mothers of children with CP who gave their valuable time for this research.

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