

Psychological Characteristics of Mothers of Children With Cerebral Palsy

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Abstract- The aim of the study was to determine the psychological characteristics of mothers of children with cerebral palsy. The study included a sample of 30 respondents. The sample consisted of mothers of children with cerebral palsy, chronologically aged 25 to 60. The research was conducted at the Centre for Children with Multiple Disabilities "Koraci Nade". For the purpose of checking the set research aim, *Symptom Checklist-SCL-90-R*, consisting of a list of 90 particles (problems), was applied, and the task was to assess the respondent's anxiety about each of the aforementioned problems over the past week (e.g., headaches, tension or anxiety, excessive worrying). The survey data were processed using the parametric statistics method. Central tendency measures, dispersion measures were calculated, and a tabular presentation of the results was done. Based on the results of the research, it can be concluded that the mothers of children with cerebral palsy have the most pronounced problems in areas of somatization, depression, obsessive-compulsive disorders, as well as anxiety.

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Introduction

In 1998, the World Cerebral Palsy Commission defined cerebral palsy as "a permanent but not a constant movement disorder, caused by damage to the nervous system during development, before or during childbirth or in the first infant months (1). Seen in brains of those from fetal to early childhood periods with symptoms such as ataxia, spasticity, walking with one foot or leg dragging or walking on toes, crouched or scissor-like gait, and muscle tone, cerebral palsy (CP) is a non-progressive neurologic disorder permanently affecting the body movement and muscle coordination and leading to limitations in activities (2). The birth of a child is a period of expectation, joy, and fulfillment of the parents' potential plans and wishes with the child. When the same parents come up with unexpected news covering the potential risk of their own child's developmental and health problems, it is most often followed by a period of new anxieties, questions, despair that results in stress if the parent considers him/herself incompetent or unprepared for the new role in life (3). Parents harbor numerous dreams, fantasies, illusions, and projections of the future regarding their children. Disability destroys those dreams, fantasies, illusions, and projections of the

future, generating pain for parents and coping with the complicated and exhausting task of raising the child they have, not the child they dreamed of having. They must therefore move on with their lives, accept their child and let go of lost dreams, and create new ones. To achieve this, parents must go through a grieving process. Grieving is a process that gives parents of children with special needs the opportunity to change internally and externally. It enables separation from lost dreams through the following states: denial, anxiety, fear, guilt, depression, and anger (4). Available studies that have examined some of the psychological characteristics of mothers of children with the cerebral palsy show that mothers and fathers of children with cerebral palsy are at greater risk of stress and adjustment problems in relation to the parents of children without disabilities and health problems (5).

The process of telling parents about a diagnosis of physical or intellectual disability of their child creates a major burden on the family, especially on the mother, who usually serves as the primary caretaker of the child (6).

Accordingly, the aim of the study was to determine the psychological characteristics of mothers of children with cerebral palsy.

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Materials and Methods

The study included a sample of 30 respondents. The sample consisted of mothers of children with cerebral palsy, chronologically aged 25 to 60. The research was done at the Centre for Children with Multiple Disabilities "Koraci Nade", Tuzla (Bosnia and Herzegovina). This was an individual study, and the respondents and examinees were given instructions on how to fill the questionnaire.

For the purpose of checking the set research aim, *Symptom Checklist-SCL-90-R*, consisting of a list of 90 particles (problems), was applied, and the task was to assess the respondent's anxiety about each of the aforementioned problems over the past week (*e.g.*, headaches, tension or anxiety, excessive worrying). The rating is made on a Likert-type scale (0-not at all, 4-severe). The scale consists of 9 dimensions (somatization, obsessiveness-compulsiveness, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism), and the number of particles on each dimension varies from 6 to 13. In addition to results on each of these dimensions, this scale also offers three general indicators of symptom severity. These are the Global Severity Index (GSI), Positive Symptom Distress Index (PSDI), and Positive Symptom Total (PST) (7).

All of the researched data were processed by parametric statistics. The basic statistical parameters of the central tendency measure were calculated, the dispersion measures were calculated, and a tabular presentation of the results was done.

Results

Table 1 shows the results of central tendency measures and dispersion measures in mothers of children

with cerebral palsy in relation to the Symptom Checklist. In addition to the results of three general indicators of symptom severity (Global Severity Index, Positive Symptom Distress Index, and Positive Symptom Total), summary scores on each of the individual dimensions measured by this scale are shown. The Global Severity Index is obtained by summing the results of 9 dimensions of assessment and extra scales and dividing the obtained result by the total number of claims made (divided by 90, if no answers are received, then the total result is divided by the number of answered claims). It can be seen from Table 1 that the arithmetic mean of the Global Severity Index is 1.14 ± 0.58 , while the minimum and maximum results range from 0.28-2.37. Compared to the number of symptoms present by summing all positive responses (excluding the response scaled as zero), the arithmetic mean is 60.57 ± 17.96 , while the minimum and maximum results range from 23-87. The results of the Positive Symptom Distress Index severity, obtained by summing the values on each of the affirmative claims and dividing by the number of affirmative responses, indicate that the arithmetic means 1.58 ± 0.58 , while the minimum and maximum results range from 0.78-3.24. Based on the results of somatization consisting of 12 assessment claims, it can be seen that the arithmetic mean is 18.13 ± 7.97 , the median and mode are 18 and 11, respectively, while the minimum and maximum results range from 5-33. The results of the coefficient of asymmetry and flatness indicate that the results are symmetric ($Sk=0.05$) and that they are platykurtic ($Ku=1.06$).

With respect to obsessive-compulsive disorders consisting of 10 assessment claims, the arithmetic mean is 13.09 ± 6.35 , while the minimum and maximum results range from 4-22.

Table 1. Descriptive statistics (SCL 90)

Varijable	AM	SG	MED	MOD	SD	MIN	MAX	Sk	Ku
Global Severity Index	1.14	0.12	1.10	0.51	0.58	0.28	2.37	0.28	0.86
Number of Symptoms	60.57	3.75	65.00	71.00	17.96	23.00	87.00	0.68	0.33
Positive Symptom Distress Index	1.58	0.12	1.58	1.08	0.58	0.78	3.24	1.03	1.74
Somatization	18.13	1.66	18.00	11.00	7.97	5.00	33.00	0.05	1.06
Obsessive-Compulsive Disorders	13.09	1.32	13.00	4.00	6.35	4.00	22.00	0.05	1.48
Interpersonal Sensitivity	9.43	1.17	10.00	11.00	5.59	1.00	25.00	0.88	1.48
Depression	16.78	2.04	16.00	6.00	9.78	1.00	35.00	0.34	0.74
Anxiety	12.52	1.44	12.00	12.00	6.92	2.00	28.00	0.41	0.27
Hostility	5.22	0.87	4.00	4.00	4.18	1.00	18.00	1.79	3.43
Phobic Anxiety	3.87	0.83	3.00	0.00	3.96	0.00	14.00	1.14	0.77
Paranoid Ideation	6.52	0.93	5.00	2.00	4.46	0.00	18.00	0.83	0.39
Psychotism	8.78	1.59	8.00	0.00	7.60	0.00	29.00	1.03	1.14

The results of the coefficient of asymmetry and flatness indicate that the results are symmetric ($Sk=0.05$) and that they are platykurtic ($Ku=1.48$). The arithmetic mean for interpersonal sensitivity (consisting of 9 assessment claims) is 9.43 ± 5.59 , median, and mode 10 and 11, respectively, while the minimum and maximum results range from 1-25. The results of the coefficient of asymmetry and flatness indicate that the results are positively asymmetric ($Sk=0.88$) and that they are platykurtic ($Ku=1.48$). The arithmetic mean of depression is 16.78; the arithmetic mean of anxiety is 12.52, while in phobic anxiety, it is the lowest, and it is 3.87. The results of the asymmetry and flatness coefficients for depression and anxiety indicate that the results are positively asymmetric ($Sk=0.34; 0.41$) and that they are platykurtic ($Ku=0.74; 0.27$), while the results for phobic anxiety are very asymmetrical ($Sk=1.14$) and also, platykurtic ($Ku=0.77$). In relation to hostility and paranoid ideation, the arithmetic mean is 5.22 and 6.52, while in psychoticism and extra-scale, it is 8.78 and 8.43.

The results of the coefficient of asymmetry and flatness for hostility and paranoid ideation indicate that the results are positively asymmetric ($Sk=1.79; 0.83$) and are leptokurtic for hostility ($Ku=3.43$), while for paranoid ideation, they are platykurtic ($Ku=0.39$).

Discussion

In Table 1, the results obtained for the Global Severity Index, in contrast to the results of the Martinec-Dorčić (8) study, which indicates that, based on the sample of 58 parents of children with cerebral palsy, the arithmetic mean of the Global Severity Index of mothers is 0.61 ± 0.53 . Those results obtained by the author Martinec-Dorčić (8) showed that the mothers of children with cerebral palsy have no problems in psychic functioning in the area of eight Croatian cities where the research was conducted. However, the results obtained in this study, and, following Martinec-Dorčić (8) by referring to the positive findings of the author's Symptoms Checklist (7), indicate that the findings of the Global Severity Index for the Tuzla area are positive for mothers of children with cerebral palsy. Specifically, according to Derogatis (7), Martinec-Dorčić (8) states that the threshold values for identifying the problem are a T value of 63, corresponding to a gross result of 0.78 in female participants. Considering that in this research, the gross result is higher than the threshold values, it is reasonable to conclude that the problems of psychic

functioning in Tuzla (Bosnia and Herzegovina) were identified in mothers of children with cerebral palsy.

In terms of the Positive Symptom Total, these results contradict the results of the Martinec-Dorčić study (8). The results of the Severity Index are almost similar to the results of Martinec-Dorčić (8), who obtained that the arithmetic mean of this Index is 1.53 ± 0.48 . The results with respect to depression are similar in the studies by Diwan *et al.*, (9), Manuel *et al.*, (10), and Sajedi *et al.*, (11), who found that depression is expressed in mothers of children with cerebral palsy. Also, compared to earlier studies by Mehmedinovic, Osmanovic, and Ahmetovic (12), it has been confirmed that mothers of children with cerebral palsy are depressed, which in fact suggests that professional support for the family should be equally important as the care for the child.

Parents of children with developmental risk or disabilities in many everyday situations experience failure. Experiencing failure for a long time implies that their interpretations of their own competence for the role of a good parent become lower, regardless of the actual level of their competence. The long-term consequence of the unfulfilled need for competence and respect by other people may be a result of low self-esteem, poor social adaptation, and social anxiety (13), which can automatically affect parent-child interaction.

Also, the results obtained in this study support the fact that, in general, parents of children with disabilities experience depression that is caused by multiple stressors (14,15,16), and also supports studies that have shown that mothers of children with disabilities have severe depression (17,18,19).

Based on the results of the research, it can be concluded that in mothers of children with cerebral palsy, the Global Severity Index, Positive Symptom Distress Index, and Positive Symptom Total are all elevated, of which, with insight into the remaining dimensions of assessment, the most pronounced problems are somatization, depression, obsessive-compulsive disorders as well as anxiety. The results of the research show that a comprehensive system of support for the family (especially the mother) is needed in the rehabilitation of children, with the aim of promoting and maintaining mental health.

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