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The relationship between self-efficacy and caregiving burden among parents of children with cerebral palsy

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ABSTRACT

Aims: This descriptive study aimed to determine the relationship between self-efficacy levels and the caregiving burden of parents caring for children with cerebral palsy.

Methods: The sample of the study consisted of 128 parents of children with cerebral palsy attending four special education and rehabilitation centers affiliated with Van Provincial Directorate of National Education. Data were collected between January and August 2023 using the Introductory Information Form, the Parental Self-Efficacy Scale (PSES) and the Burden of Caregiving Scale (CBSS). Data was collected through face-to-face interviews with parents. The principles of scientific ethics and data confidentiality were followed at all stages of the study.

Results: Outcomes showed a moderate negative correlation between PSES and CBSS scores, indicating that higher self-efficacy is associated with lower caregiving burden. Factors such as social insurance, caregiving support, and income level significantly influenced caregiving burden. Parents with fewer children, higher education levels, and children with mild mobility limitations had higher self-efficacy scores. Similarly, caregiving burden was found to be greater among parents of children with intellectual disabilities, lower income levels, feelings of burnout, and future anxiety.

Conclusion: The study highlights the importance of identifying the factors that affect caregiving burden and self-efficacy. Nurses should adopt a multidisciplinary approach to identify parental strengths and weaknesses and provide targeted interventions. Training in this area and targeted interventions to enhance parental self-efficacy could significantly reduce caregiving burdens.

Keywords: Care burden, cerebral palsy, nurse, parental self-efficacy, parent

INTRODUCTION

Cerebral palsy (CP) is a permanent but non-progressive neurodevelopmental disorder, representing a heterogeneous clinical syndrome caused by prenatal, perinatal, or intrapartum brain injury.[1] The prevalence of CP ranges from 2.3 to 3.6 per 1,000 children, though this rate varies between and within countries.[2] From the prenatal period through the neonatal period, one or more risk factors affecting the developing brain may result in CP. The most common risk factors include premature birth, low birth weight, placental abnormalities, hypoxia, intrauterine infections, intracranial hemorrhage, neonatal asphyxia, multiple pregnancies, periventricular leukomalacia, and vascular disorders.[3]

In addition to motor impairments, children with CP may experience intellectual disabilities, epileptic seizures, pain, sensory impairments (such as hearing and vision problems), as well as musculoskeletal, respiratory, gastrointestinal, oral-motor, sleep, and behavioral challenges. These issues can significantly impair their overall health, functionality, social interactions, comfort, sleep patterns, and quality of life.[1,4]

Parents play a pivotal role in the treatment, care, and rehabilitation of children with CP.[5] They often spend the majority of their time caring for their child,[6] and some may even neglect their own needs.[1,7] Caring for a child with CP can lead to feelings of hopelessness, anxiety, and depression, as well as physical health issues and social isolation for the parents.[6] Consequently, children with CP frequently require lifelong comprehensive care and rehabilitation, placing a significant psychological, physical, financial, and caregiving burden on their families.[8]

This caregiving burden can negatively impact parents' self-efficacy levels.[2,9] At this point, nurses can identify parents' strengths and weaknesses in the care process and provide counseling and support to increase their self-efficacy, thus helping to alleviate the burden of care for parents.[6] Higher self-efficacy enables parents to better manage both their own health and the health of their children.[10] Improved parental self-efficacy may lead to better quality care and treatment for children with CP,[6] as well as increased comfort for the child.[2,9]

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The aim of this study was to examine the care burden and self-efficacy levels of parents of children with CP and to evaluate the relationship between them. Although various studies have been conducted in the literature on the difficulties and burden of care faced by parents of children with CP, it is seen that this issue has been addressed less in terms of self-efficacy. In particular, it is understood that comprehensive data on the effect of parents' self-efficacy levels on their children's quality of care and family life are limited. This study aims to fill this gap in the existing literature and to guide both nurses and families with the findings obtained.

Objective

The aim of this study is to determine the relationship between the self-efficacy levels of parents caring for a child with CP and their caregiving burden.

METHODS

Ethics

Prior to the study, approval was obtained from the Van Yüzüncü Yıl University Non-interventional Clinical Researches Ethics Committee (Date: 29.07.2022, Decision No: 2022-7/14) and the necessary institutional permissions for the study were obtained from their affiliated institutions. During the research data collection process, the principles of the Declaration of Helsinki, scientific ethics and data confidentiality principles were followed.

Research Questions

- Is there a relationship between self-efficacy levels of parents caring for children with cerebral palsy and care burden?
- Do parents' demographic characteristics (age, gender, educational status, socioeconomic status, etc.) affect their self-efficacy levels?
- Do parents' demographic characteristics (age, gender, educational status, socioeconomic status, etc.) affect the burden of care?
- Do parents' self-efficacy levels have an effect on burden of care?

Design

This study utilized a descriptive survey model to investigate the relationship between self-efficacy levels and the caregiving burden of parents caring for a child with cerebral palsy. Additionally, a relational survey model was employed to define the relationships between these variables, explain the findings, and develop recommendations. This combined approach allowed for both a comprehensive overview and an in-depth analysis of the topic.

Study Location and Timeframe

The study was conducted in four special education and rehabilitation centers from January 2023 to August 2023. No specific selection was made in the sample selection; instead, all parents (n = 128) who had a child with CP between the ages of 1 and 18 years and agreed to participate in the study during the specified time period were included. Only three parents with communication problems were excluded from the study. Written and verbal informed consent was obtained from all parents who agreed to participate in the study before data collection. The data were collected by the researchers in a meeting room using a 15-minute face-to-face interview method.

Data Collection Methods and Tools

In the study, the Descriptive Information Form,[4,11] Parental Self-Efficacy Scale[12] (PSES) and Burden of Caregiving Scale[13] (CBSS) prepared in line with the literature were used.

Descriptive Information Form: This form consists of 24 questions about the sociodemographic characteristics of the parents (educational status, economic status, occupation, etc.) and identifying characteristics of the child (age, gender, etc.).

Parental Self-Efficacy Scale: Parental Self-Efficacy Scale is a scale adapted into Turkish by Diken[14] and updated by Cavkaytar et al.[12] and used to measure the self-efficacy perceptions of parents of children with disabilities regarding their parenting skills. The scale is a Likert-type rating tool from 1 to 7. The scale consists of a total of 17 items with a minimum score of 17 and a maximum score of 119. Self-efficacy increases as the score level increases. Cronbach's Alpha internal consistency coefficient of the scale was found to be 0.95. In this study, it was found to be 0.74.

Caregiving Burden Scale: This scale, which was developed to assess the stress experienced by caregivers of the elderly or individuals in need of care, was adapted to Turkish culture and its validity and reliability study was conducted by İnci and Erdem[13] in 2006. The Caregiver Burden Scale is a 22-item Likert-Type Scale ranging from 0 to 4. A minimum score of 0 and a maximum score of 88 can be obtained from the scale. A high scale score indicates that the distress experienced is high. A score between 0-20 indicates "no care burden," between 21-40 indicates "light care burden," between 41-60 indicates "moderate care burden" and between 61-88 indicates "heavy care burden." The internal consistency coefficient of the scale was determined as 0.95. In this study, it was found to be 0.75.

Statistical Analysis

Descriptive statistics for continuous variables are presented as means, standard deviations, minimum, and maximum values. For categorical variables, frequencies are presented as numbers and percentages. To compare the scale scores across participant groups, the Independent Sample T test and One-way Analysis of Variance (ANOVA) were used. For comparisons involving more than two groups, Duncan post hoc test was employed to identify the groups showing significant differences. Pearson correlation coefficients were calculated to assess the relationship between the scale scores. In addition, linear regression analysis was conducted to examine the predictive value of the scales. Statistical significance was set at $p<.05$.

RESULTS

This section presents the findings obtained from analyses conducted in line with the study's objectives.

When Table 1 was analyzed to determine differences between groups, a significant difference was found in the variables of social insurance, support in care, and income level in relation to PSES, based on the demographic data obtained from the

Table 1. Findings related to the variables in which significant differences were found between independent variables groups

Variables	n (%)	PSES X±SE	T/F	p	CBSS X±SE	T/F	p
Parents age							
29-52 years old	54 (42.19)	84.75±11.15			34.2±8.83		
30-39 years old	36 (28.13)	85.05±12.47	.523	.594	35.3±9.31	.451	625
Over 40 years old	38 (29.69)	86.54±11.24			35.52±8.13		
Total	128 (100)	85.45±11.62			34.67±8.76		
Parenting situation							
Mum	104 (81.25)	91.23±11.22			37.73+8.28		
Father	24 (18.75)	93.71±9.44	.571	.568	36.70+9.32	.041	.968
Total	128 (100)	92.47±10.33			37.215±8.80		
Intellectual disability							
Yes	89 (69.5)	86.11±12.82	-1.438	.154	37.55±9.84	3.600	.001*
No	39 (30.5)	89.21±10.42			31±8.56		
Total	128 (100)	87.05±12.18			35.55±9.91		
Movement restriction							
Light	30 (23.4)	b94.77±8.3	10.458	.001*	a29.07±5.41	13.990	.001*
Middle	31 (24.2)	^{a}87.55±12.25			b33.81±10.81		
Heavy	67 (52.3)	^{a}83.37±12.08			c39.27±9.41		
Total	128 (100)	87.05±12.18			35.55±9.91		
Social insurance							
Yes	91 (71.1)	90.04±10.38	4.248	.001*	33.2±8.63	-4.160	.001*
No	37 (28.9)	79.7±13.25			41.35±10.58		
Total	128 (100)	87.05±12.18			35.55±9.91		
Number of children							
One	20 (15.6)	^{b}91.2±8.84	3.393	.037*	35.9±9.81	.463	.630
Two	55 (43)	^{b}88.53±12.72			34.6±10.28		
Three or more	53 (41.4)	^{a}83.96±12.13			36.42±9.66		
Total	128 (100)	87.05±12.18			35.55±9.91		
Care support							
Yes	68 (53.1)	89.46±11.01	2.420	.017*	33.81±8.89	-2.152	.033*
No	60 (46.9)	84.33±12.94			37.53±10.69		
Total	128 (100)	87.05±12.18			35.55±9.91		
Parents education level							
Elementary school	62 (48.4)	^{a}81.35±10.95	17.889	.001*	36.61±11.44	1.109	.333
Secondary school	30 (23.4)	^{b}90.13±10.89			33.33±8.77		
High school and above	36 (28.1)	^{b}94.31±10.54			35.58±7.64		
Total	128 (100)	87.05±12.18			35.55±9.91		
Income level							
Income<expenditure	55 (43)	83.27±12.38	-3.155	.002*	39.15±10.72	3.607	.001*
Income≈expenditure	73 (57)	89.9±11.29			32.85±8.35		
Total	128 (100)	87.05±12.18			35.55±9.91		
Employment status							
Working	26 (20.3)	83±14.31	-1.681	.057	45.96±10.36	6.002	.001*
Not working	102 (79.7)	88.09±11.42			32.9±7.87		
Total	128 (100)	87.05±12.18			35.55±9.91		
Burnout							
Yes	35 (27.3)	85.83±14.61	-.697	.487	38.43±11.23	2.037	.044*
No	93 (72.7)	87.52±11.18			34.47±9.2		
Total	128 (100)	87.05±12.18			35.55±9.91		
Anxiety about the future							
Yes	100 (78.1)	86.59±12.47	-.815	.417	36.53±10.01	2.133	.035*
No	28 (21.9)	88.71±11.11			32.07±8.86		
Total	128 (100)	87.05±12.18			35.55±9.91		

*: p<.05, a, b, c: Shows different groups, PSES: Parental Self-Efficacy Scale, SE: Standard deviation, CBSS: Burden of Caregiving Scale

participant parents (p<.05). Specifically, it was observed that participants with social security, those receiving support in caregiving, and those whose income was equal to their expenses had statistically significantly higher PSES scores. Additionally, when examining variables with more than two subgroups, children with mild mobility restrictions scored higher in PSES compared to those with moderate or severe mobility restrictions. Similarly, parents with 1 or 2 children had higher PSES scores than those with 3 or more children. Parents with secondary, high school, or higher education levels also scored higher than those with primary school education. In contrast, no significant differences were observed in PSES across other demographic variables (p>.05). Similarly, when analyzing the demographic data in terms of CBSS, significant differences were identified in the variables of intellectual disability, social security, support in care, income level, employment status, burnout, and future anxiety (p<.05). Specifically, CBSS levels were higher for parents with children who had intellectual disabilities, those without social security, those not receiving support in caregiving, those whose income was less than their expenses, those who were employed, and those experiencing burnout or future anxiety. Among variables with more than two subgroups, a significant difference was found only in the mobility limitation variable, where CBSS levels increased as the child's mobility limitation became more severe (p<.05). No significant differences were found in CBSS across other demographic subgroups (p>.05).

Furthermore, as shown in Table 2, the study examined whether the mean PSES and CBSS scores of participant parents differed according to subgroups such as speaking status, consanguineous marriage, type of home, child's gender, and the effects of the condition on relationships, responsibilities, anger, unhappiness, sadness, and compassion.

Table 2. Findings related to variables for which no significant difference was found between independent variables groups

Variables	n(%)	PSES X±SE	T/F	p	CBSS X±SE	T/F	p
Speech status							
Yes	30 (23.4)	86.37±12.33	-.352	.725	36.8±11.2	.785	.434
No	98 (76.6)	87.27±12.19			35.17±9.51		
Total	128 (100)	87.05±12.18			35.55±9.91		
Consanguineous marriage							
Yes	28 (21.9)	86.68±13.41	-.184	.854	36.29±8.99	.440	.661
No	100 (78.1)	87.16±11.88			35.35±10.19		
Total	128 (100)	87.05±12.18			35.55±9.91		
House type							
Detached house	81 (63.3)	85.72±12.63	-1.644	.103	36.26±10.47	1.056	.293
Apartment	47 (36.7)	89.36±11.12			34.34±8.84		
Total	128 (100)	87.05±12.18			35.55±9.91		
Gender of the child							
Girl	65 (50.8)	85.52±11.99	-1.452	.149	36.75±11.03	1.401	.164
Boy	63 (49.2)	88.63±12.27			34.32±8.52		
Total	128 (100)	87.05±12.18			35.55±9.91		
Effects on relationships							
Slightly affected	17 (13.3)	85.94±12.89	-.404	.687	35.65±8.46	.041	.967
Highly affected	111 (86.7)	87.23±12.12			35.54±10.15		
Total	128 (100)	87.05±12.18			35.55±9.91		
Effects on responsibilities							
Slightly affected	23 (18)	88.83±8.89	.967	.339	34.13±9.05	-.760	.449
Highly affected	105 (82)	86.67±12.79			35.87±10.1		
Total	128 (100)	87.05±12.18			35.55±9.91		
Effects on anger							
Yes	30 (23.4)	88.4±11.93	.690	.491	36.07±10.1	.322	.748
No	98 (76.6)	86.64±12.28			35.4±9.9		
Total	128 (100)	87.05±12.18			35.55±9.91		
Unhappiness							
Yes	41 (32)	89.1±11.44	1.306	.194	34.76±9.92	-.624	.534
No	87 (68)	86.09±12.46			35.93±9.94		
Total	128 (100)	87.05±12.18			35.55±9.91		
Anger							
Yes	30 (23.4)	88.4±11.93	.690	.491	36.07±10.1	.322	.748
No	98 (76.6)	86.64±12.28			35.4±9.9		
Total	128 (100)	87.05±12.18			35.55±9.91		
Sadness							
Yes	78 (60.9)	87.4±12.8	.396	.692	35.37±9.95	-.260	.795
No	50 (39.1)	86.52±11.24			35.84±9.95		
Total	128 (100)	87.05±12.18			35.55±9.91		
Compassion							
Yes	87 (68)	86.63±11.86	-.570	.570	35.7±10.1	.243	.809
No	41 (32)	87.95±12.94			35.24±9.61		
Total	128 (100)	87.05±12.18			35.55±9.91		

PSES: Parental Self-Efficacy Scale, SE: Standard deviation, CBSS: Burden of Caregiving Scale

When Table 2 is examined, as a result of the analyzes, it was determined that the variables in the table did not cause a significant difference in the scales (p>.05).

When Table 3 is examined, it is seen that the participant parents had a mean score of 87.05±12.18 from the ESLS, where the total mean score can vary between 17-119 (the lowest score of 17 points can be obtained from the scale and the highest score of 119 points can be obtained). Similarly, the participants had a mean score of 35.55±9.91 on the BVLS, where the total mean score can vary between 0-80 (minimum score of 0 and maximum score of 88 can be obtained from the scale). A high scale score indicates that the distress experienced is high. A score between 0-20 indicates "no care burden", between 21-40 indicates "light care burden", between 41-60 indicates "moderate care burden" and between 61-88 indicates "heavy care burden").

Table 3. General descriptive statistics of the scales

Scale	n	Min	Max	Mean	SD	Skewness	Kurtosis
PSES	128	47.00	108.00	87.05	12.18	-.543	-.079
CBSS	128	15.00	70.00	35.55	9.91	.989	.850

Min: Minimum, Max: Maximum, SD: Standard deviation, PSES: Parental Self-Efficacy Scale, CBSS: Burden of Caregiving Scale

The results of the correlation analysis, which aimed to determine the relationship between PSES and CBSS among the participant parents, and the linear regression analysis, which explored the predictive power of these variables, are displayed in Table 4.

Table 4. Correlation and linear regression analyses

Variable	B	SE	Beta	T	p.	R	Adj. R2
Constant*	76.741	5.185		14.799	.001*	-.581	.333
PSES	-.473	.059	-.581	-8.019	.001*		

*: Dependent variable: CBSS: Burden of Caregiving Scale, SE:Standard error, PSES: Parental Self-Efficacy Scale

Upon examining Table 4, a moderate negative linear relationship (0.30<r<0.70) was found between PSES and CBSS (r=-0.581, p<0.05). This indicates that as PSES scores increase, CBSS scores decrease. The independent variable (PSES) explains 33.3% of the variance in the dependent variable (CBSS), and this relationship is statistically significant. When the regression coefficients are analyzed, it is observed that for each unit increase in PSES, CBSS decreases by approximately 0.473 units, and this effect is statistically significant (p < 0.05).

The analysis of regression shows that PSES accounts for 33.3% of the total variance in CBSS, meaning that PSES explains a substantial portion of the variation in CBSS. These findings demonstrate that PSES is a moderate predictor of CBSS, with a negative relationship between the two. The model generally provides a good fit, and PSES is confirmed as a significant predictor of CBSS, with results statistically significant.

DISCUSSION

In this study, which examined the relationship between PSES and caregiving burden in caregivers of children with cerebral palsy, several evaluations regarding the relationship between these variables were made based on the obtained findings. Researchers who focus on the psychosocial development of children with developmental disorders suggest that parental self-efficacy can significantly impact a child's development.[15,16] Drawing on Bandura's social-cognitive theory, parental self-efficacy is defined as an individual's belief in their ability to organize and perform tasks necessary to achieve a specific success.[17] Parents with high PSES can effectively shape their thoughts and behaviors to best support their children's development.[18] In other words, even when confronted with numerous stressors, parents with high PSES contribute to positive developmental outcomes for their children.[5]

High self-efficacy is a key factor enabling parents to exhibit appropriate behaviors towards their children with developmental delays.[19] Similarly, when PSES levels are high, parents are believed to provide more suitable feedback to their children by managing challenging and stressful situations effectively.[20] In the literature, parental self-efficacy levels have been found to be either high[11,20] or moderate[21] in studies involving parents of children diagnosed with disabilities or at risk of developmental delays. In this study, the PSES levels of parents were found to be high (Table 3). This elevated level of parental self-efficacy is believed to result from institutional support, where parents regularly receive training for their needs and can easily access relevant information through the internet.

Caring for children with cerebral palsy is a stressful and challenging task for primary caregivers, especially parents. Parents of children with CP experience a greater caregiving burden than those caring for healthy children.[8] As the score on the caregiving burden scale increases, so does the caregiving burden perceived by parents.[22] Karahan and Islam[23] found a moderate caregiving burden in a study involving 23 mothers of children with CP. Similarly, Wijesinghe et al.[24] examined caregiving difficulties among mothers of children with CP using the "Caregiver Difficulties Scale" and identified a moderate level of burden. In this study, the caregiving burden among parents was observed to be comparatively lower (Table 3). This is thought to be a result of the demographic and socioeconomic characteristics of the parents who participated in the study, the support they received, the environmental factors they experienced, and the fact that they saw the care burden as a part of the parental role rather than a burden and acted to help their children.

When the relationship between PSES and CBSS was analyzed, it was found that PSES was a significant predictor of CBSS, and the results were statistically significant. Accordingly, the findings showed that as parental self-efficacy increased, the perceived caregiving burden decreased (Table 4). These results are consistent with previous studies, which have also demonstrated a negative relationship between CBSS and PSES.[25] Parents with high self-efficacy tend to exhibit more supportive behaviors in caring for and treating their children. Supporting parents of children with chronic disabilities, such as CP, in caregiving and education can increase parental self-efficacy and, in turn, promote the child's development. Reducing parents' caregiving burden is thought to strengthen the parent-child bond and encourage parents to take a more active role in their child's care.

Social insurance provides both financial and emotional support to parents in meeting the special care needs of their children. These services alleviate the financial burden on parents, enabling them to feel more confident in addressing their children's health, education, and overall care needs.[26] Research indicates that parents with access to social security exhibit higher self-efficacy, as these supports make them feel better equipped and more confident.[27] In our study, it was found that the PSES scores of parents with social security were significantly higher. Thus, social security appears to positively impact parenting self-efficacy by enhancing parents' ability to provide improved care for their children.

Caring for children with cerebral palsy often requires considerable physical and mental effort.[28] External care support has been shown to positively influence parents' self-efficacy, as it helps them manage daily tasks more effectively and allows for increased quality time with their children. This external support also bolsters parents' belief that they can provide better care for both themselves and their children.[26] In addition, a study revealed that mothers who received support from their spouses or other relatives tended to report higher parenting self-efficacy.[29] Similarly, in our study, parents who received assistance from care centers demonstrated higher self-efficacy. However, it is suggested that parents who receive support from care centers but not from family members may still experience lower PSES scores due to the physical, mental, and emotional challenges of childcare, leading to feelings of inadequacy.

The literature reveals that parenting self-efficacy tends to increase with higher levels of education. In Dursun and Bıçakçı's[30] study, mothers with undergraduate degrees exhibited higher self-efficacy compared to those with only primary school education, while Öztürk and Giren[31] found that mothers with high school diplomas had higher self-efficacy than those with primary school education. In our study, significant differences in PSES scores were observed based on educational status. This may be because some parents, because of their profession or educational background, possess greater knowledge of child development, which may contribute to higher self-efficacy. Additionally, these differences may be related to the content of the education received by the parents.

Several studies have noted that low-income parents often experience heightened anxiety about caring for their children, which negatively impacts their parenting self-efficacy.[32,33] Government support programs and social security services can help mitigate these effects, though the accessibility and quality of such services often depend on income levels.[28] In our study, parents whose income matched their expenses demonstrated significantly higher PSES scores. In general, parents with higher income levels may have higher self-efficacy because they can access more resources for their children's care, while low-income parents face more challenges in this regard.

Children with cerebral palsy often have motor disorders accompanied by intellectual disabilities, sensory issues, respiratory and nutritional problems, as well as communication, perception, and behavioral difficulties, leading to significant impairments.[34] As the child's level of dependency increases, the caregiving burden on parents may also rise. It is hypothesized that parents' self-efficacy may diminish due to reduced expectations from their child, compounded by the learned helplessness that can develop over time in response to the child's lifelong condition.[35] Our study found that parents of children with mild mobility limitations had significantly higher PSES scores compared to those with moderate or severe mobility limitations (**Table 1**). This relationship may be attributed to the increased caregiving demands, which, in turn, negatively affect parents' self-efficacy.

Research indicates that having many children can create additional stress for parents, potentially reducing their perception of self-efficacy. Parents with multiple children may struggle to balance the needs of a child with cerebral palsy (CP) with those of their other children.[27] Our study found that parents with one or two children reported higher mean PSES scores compared to those with three or more children. This suggests that a larger number of children may increase parental stress, thereby reducing self-efficacy and complicating the balance of caregiving responsibilities.

Caring for a child with an intellectual disability can impose a significant burden on family members, which is often influenced by the caregiver's personal perceptions and responses during caregiving.[36] Üstün et al.[22] found a significant relationship between the child's mental disability status and the parents' caregiving burden. Other studies have shown that as the degree of a child's disability increases, so does the caregiving burden.[37,38] Our study also identified a positive relationship between caregiving burden and the child's intellectual disability (**Table 1**). Despite support from care centers, the presence of intellectual disability in children with CP extends the caregiving time, which significantly increases the burden on parents.

As children's mobility limitations increase, so does the caregiving burden on their parents. Children with severe mobility restrictions require more assistance with daily activities, leading to increased physical, emotional, and time-related responsibilities for parents.[39] Ribeiro et al.[40] observed that as mobility limitations in children intensified, the caregiving burden also increased. Our study's multiple comparison test results similarly showed that the CBSS levels increased with greater mobility limitations in the child (**Table 1**). Even with physical care and rehabilitation support, parents of children with severe mobility limitations expend more time and energy, further raising the CBSS.

Social insurance plays a crucial role in mitigating the caregiving burden for parents.[41] Literature suggests that many parents of children with CP lack social security.[42,43] However, our study found that most parents had social security and those without it experienced a higher caregiving burden (**Table 1**). This underscores the importance of social security in alleviating the caregiving burden. Financial and moral support provided through social security can facilitate a more sustainable and higher-quality caregiving process.

The availability of caregiving support significantly impacts the caregiving burden for parents of children with CP.[41] Our study found that parents who did not receive caregiving support reported higher CBSS levels (**Table 1**). Even with care center support, the lack of assistance from spouses and family members can create additional challenges in caring for children with CP and increase the overall caregiving burden.

The income level of parents of children with CP significantly impacts the burden of caregiving. Taşçıoğlu et al.[44] found that caregiving burden varies according to parental income levels. Bufteac et al.[45] suggested that income level can be either a protective or risk factor for children diagnosed with CP, as it influences access to treatment opportunities. Their study indicated that parents whose income was insufficient to cover their expenses reported higher levels of caregiving burden (**Table 1**). While high-income families can afford more services and support for their children's care, low-income families often face financial difficulties that exacerbate their caregiving burden.

Employment status also plays a crucial role in the caregiving burden experienced by parents.[46] Ahanotu et al.[47] found that parents' employment status directly affects the caregiving burden they experience for their children with epilepsy. In a similar vein, this study found a statistically significant difference between the employment status of parents of children with CP and their mean CBSS scores ($p<0.05$) (**Table 1**). The higher caregiving burden reported by working parents, despite receiving external professional support, is likely due to the challenges in balancing work and caregiving responsibilities.

As caregiving burden and difficulties increase, parents are prone to burnout[48] and future anxiety[49]. The caregiving burden score was lower among those experiencing burnout and anxiety compared to those who did not (**Table 1**). Despite receiving institutional support and having lower caregiving burden scores, the stress and challenges associated with the disease, along with concerns about the future particularly uncertainties regarding their children's lives after their own aging or death may heighten parents' future anxiety and contribute to burnout.

It is thought that there is a negative relationship between care burden and parental self-efficacy. High care burden may reduce parents' self-confidence and their belief in their ability to meet their children's needs. On the other hand, it has been observed that parents with high self-efficacy are better able to manage care burden and experience less psychological distress. Therefore, interventions aimed at increasing parents' self-efficacy may be effective in reducing the negative effects of care burden.[50]

Limitations

This study was conducted with parents of children with cerebral palsy using self-report scales. It should be noted that the study was conducted in one region, which may limit the generalizability of the findings to other populations. The limitations of self-report scales, such as potential bias or inaccuracy in responses, also apply. Additionally, the cross-sectional design of the study restricts the ability to infer causality. Despite these limitations, the findings contribute to a better understanding of the relationship between parents' care burden and self-efficacy and may inform future research in this area.

CONCLUSION

The study's results indicate that the care burden experienced by parents of children with cerebral palsy is influenced by various factors. Parents with higher levels of self-efficacy manage this burden more effectively. Elevated self-efficacy enables parents to provide better care, reduces the care burden, and supports their children's development. Factors such as social security, caregiving support, parents' education, and income levels enhance both the parents' self-efficacy and the quality of care they provide. In conclusion, multiple factors affect the care burden and self-efficacy of parents of children with cerebral palsy. Nurses, as healthcare professionals, should assess parents' strengths and weaknesses and provide multidisciplinary interventions. These interventions can improve the quality of life for both parents and children by helping parents assume a more supportive role in their children's care. Nurses need to increase general and clinically based interventions, especially on important issues such as self-efficacy and burden of care. Planning training programmes to increase self-efficacy, conducting research that examine the relationship between care burden and care burden in more depth, and developing interventions that can be applied in the clinical environment will contribute to providing a more effective care process at both individual and social levels.

ETHICAL DECLARATIONS

Ethics Committee Approval

The study was carried out with the permission of the Van Yüzüncü Yıl University Non-interventional Clinical Researches Ethics Committee (Date: 29.07.2022, Decision No: 2022-7/14).

Informed Consent

Signed and informed consent forms were obtained from all parents.

Referee Evaluation Process

Externally peer-reviewed.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

Financial Disclosure

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Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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