The Effect of Spiritual Coping Skills on Psychological Resilience and Health Beliefs of Mothers with Children with Special Needs

Keywords
health belief, psychological resilience, Mother with a child with a disability, spiritual coping

Abstract

Introduction

Mothers of children with special needs face many different responsibilities and struggles while coping with the challenges of daily life. Mothers struggle not only with the care and needs of their children, but also with maintaining their own psychological resilience. In this study, the mediating role of spiritual coping skills in psychological resilience and health beliefs of mothers with children with special needs was investigated.

Material and methods

A cross-sectional descriptive design was used, following STROBE reporting guidelines. The study involved 3000 mothers from eight special education and rehabilitation centers, with 376 mothers selected through proportional stratified random sampling. Data were collected using the ‘Descriptive Characteristics Form’, ‘Maternal Spiritual Coping Scale’, ‘Psychological Resilience Assessment Scale’, and ‘Parental Health Belief Scale’. Descriptive analyses were conducted for demographic data and parameter results, while regression analysis was used to assess relationships between variables, and correlation coefficients were calculated. Data were analyzed using a specialized statistical program.

Results

Positive correlations were found between the Maternal Spiritual Coping Scale and the Psychological Resilience Assessment Scale ($r=0.296$, $p<0.001$), as well as the Parental Health Belief Scale ($r=0.309$, $p<0.001$). A positive correlation was also observed between the Psychological Resilience Assessment Scale and the Parental Health Belief Scale ($r=0.209$, $p<0.001$).

Conclusions

In the study, it was determined that mothers' spiritual coping strategies played an important role in their psychological health and their attitudes towards their children's health problems.

The Effect of Spiritual Coping Skills on Psychological Resilience and Health Beliefs of Mothers with Children with Special Needs

[1]Neslihan ÖZCANARSLAN, RN, Ph.D., [2]Merve KOYUNCU, Lec.

[1]Neslihan ÖZCANARSLAN, RN, Ph.D.
Toros University Faculty of Health Sciences,
Department of Public Health Nursing, Mersin, Turkey
e-mail: neslihan.ozcanarslan@toros.edu.tr
ORCID ID: 0000- 0002- 3613- 6319
Phone Number: +905336671604

[2]Merve KOYUNCU, (Lec.)
Toros University, Vocational School of Health Services,
Department of Child Care and Youth Services, Child Development Program,
Mersin, Turkey
e-mail: merve.koyuncu@toros.edu.tr
ORCID ID: 0000-0003-2813-4986
Phone Number: +05377189889

Abstract

Introduction: Mothers of children with special needs face various responsibilities and challenges in daily life. They not only manage their children's care and needs but also strive to maintain their own psychological resilience. This study aimed to explore the mediating role of spiritual coping skills in the psychological resilience and health beliefs of these mothers.

Method: A cross-sectional descriptive design was used, following STROBE reporting guidelines. The study involved 3000 mothers from eight special education and rehabilitation centers, with 376 mothers selected through proportional stratified random sampling. Data were collected using the 'Descriptive Characteristics Form', 'Maternal Spiritual Coping Scale', 'Psychological Resilience Assessment Scale', and 'Parental Health Belief Scale'. Descriptive analyses were conducted for demographic data and parameter results, while regression analysis was used to assess relationships between variables, and correlation coefficients were calculated. Data were analyzed using a specialized statistical program.

Results: Positive correlations were found between the Maternal Spiritual Coping Scale and the Psychological Resilience Assessment Scale ($r=0.296$, $p<0.001$), as well as the Parental Health Belief Scale ($r=0.309$, $p<0.001$). A positive correlation was also observed between the Psychological Resilience Assessment Scale and the Parental Health Belief Scale ($r=0.209$, $p<0.001$).

Conclusions: In the study, it was determined that mothers' spiritual coping strategies played an important role in their psychological health and their attitudes towards their children's health problems.

Keywords: Mother with a child with a disability, spiritual coping, psychological resilience, health belief.

Introduction

The birth of a new member into the family leads to changes in the roles and responsibilities of the parents. Although it is thought that having a child with special needs changes the roles and responsibilities within the family, the greatest burden and responsibility falls on mothers who meet the child's care needs [1, 2]. Mothers of children with special needs encounter various responsibilities and challenges in daily life. They not only care for their children's needs but also strive to maintain their own psychological resilience. Many people use different strategies to relieve stress and cope with anxiety during major life changes [3, 4].

In this context, hope is defined as a fundamentally positive phenomenon that is essential for coping constructively with trauma, and its primary purpose is to avoid hopelessness [5]. Similarly, spiritual coping strategies are one of the main ways to manage the challenges and stresses of raising children [6, 7]. Research shows that a strong spirituality in families of children with special needs helps mothers accept their children, see them as a gift from God, feel blessed, and believe they are specially chosen [8]. These spiritual beliefs give mothers hope and emotional resilience to survive and cope with the challenges they face. An individual's spiritual coping strategies positively affect physical and mental health, increase life satisfaction, well-being, sense of purpose, meaning of life, hope and optimism, and reduce anxiety and depression [9-11]. Belief systems and spiritual skills can help increase mothers' resilience in challenging life by strengthening stress coping mechanisms.

One of the biggest challenges mothers face is managing serious issues related to their children. When mothers are healthy physically, emotionally, and spiritually, they can better support their children in coping with and recovering from their illnesses [4]. Given the important role of motherhood and the importance of spirituality in the lives of many women, it is crucial to understand how mothers use spirituality during their children's illnesses [4]. Parents' choices in medical decision-making for a sick child shape their views on what is best for their child and

how they see their role as parents [12]. Health belief explains why people do or don't take protective health actions by considering the causes and severity of a health threat, as well as the benefits, barriers, and triggers for action [13, 14]. Mothers with strong health beliefs often seek help from family, friends, traditional treatments, or health professionals. For instance, those with strong spiritual beliefs may be more proactive in addressing their children's health needs, which can improve their overall well-being.

A comprehensive literature review found no studies on the spiritual coping skills, psychological resilience, and health beliefs of mothers with children who have special needs. Examining these three areas together can help create better support programs for families and inform health policies and research. This study aims to evaluate how spiritual coping skills affect the psychological resilience and health beliefs of these mothers.

Material And Methods

Research Design and Date of the Research

The study, conducted between September 2023 and January 2024, used a cross-sectional descriptive research model and was reported in accordance with STROBE reporting guidelines.

Population and Sample of the Study

The research was conducted in 8 different Special Education and Rehabilitation Centers located in Yenişehir district of Mersin province. A total of 3,000 mothers of students in these centers constituted the population of the study. While calculating the number of registered students, siblings were considered as single children and mothers with more than one child were considered as single child mothers. According to the table of minimum acceptable sample sizes for different populations by Sekeran U. (1992); 341 mothers who volunteered to participate in the study constituted our sample with a 95% confidence interval [15]. Considering the

possibility of data loss, 35 more mothers were included and a total of 376 mothers were reached. The proportional stratified random sampling technique was used to select the research universe, taking into account the student capacities of the rehabilitation centers included in the research.

The Data Collection Process

Since the majority of children attending special education and rehabilitation centers are accompanied by their mothers, mothers were chosen as the study group. During the data collection process, institutional permission was obtained from the centers and informed consent was obtained from the mothers who would be included in the study before proceeding with data collection. The data were collected through face-to-face interviews with the mothers of the children. The data collection process took approximately fifteen minutes.

Data Collection Tools

Descriptive Features Form: It is a survey form created through a literature review [16-18]. With this form, age, marital status, number of children, education level, employment status and family income will be determined.

Maternal Spiritual Coping Scale (MSCS): This scale, whose reliability was established by Yaman et al., consists of 24 items [16]. It is a Likert-type scale and is preferred to be evaluated with 5 points. In this context, 5 = strongly agree, 4 = agree, 3 = partially agree, 2=Disagree and 1 = strongly disagree. There is no negative or reverse expression in the scoring of the scale. The participant's scores for each item are summed to provide an overall assessment. The person with the highest score is interpreted as the one who most frequently and extensively uses spiritual coping methods. Cronbach's alpha of the MSCS is .966.

Psychological Resilience Assessment Scale (PRAS): The scale was developed by Van Der Meer et al. (2018). Turkish validity and reliability was performed by Türkan et al.[17]. PRAS is a 5-point Likert-type scale with the answer key "I completely disagree" (0), "I disagree" (1),

"I am undecided" (2), "I agree" (3), "I completely agree" (4). There are no reverse-coded items in the scale. The possible scores that can be obtained from the scale are between 0-36, and the high scores obtained are interpreted as high psychological resilience. Cronbach's alpha of the PRAS is .85.

Parental Health Belief Scale (PHBS): The PHBS was developed by Amen and Clarke [19] to assess mothers' beliefs about their children's health. The adaptation to Turkish was made by Sunmaz and Başer [18]. The original scale consisted of 20 items, but during its adaptation into Turkish, 3 items were removed due to poor correlation in the item-total statistics analysis. As a result, the scale has 17 items. The six-point Likert-type scale consists of three dimensions. The evaluation of the scale is graded from "1" to "6" (strongly disagree: 1, disagree: 2, strongly disagree: 3, somewhat agree: 4, agree: 5, strongly agree: 6). The minimum score that can be obtained from the scale is 17, the maximum score is 102. The Cronbach's alpha coefficient for the whole adapted scale was found to be 0.79, and the Cronbach's alpha coefficient of the sub-dimensions was found to vary between 0.63 and 0.72 [18].

Statistical Analysis

The data obtained in the study were analyzed using a special statistical analysis program (SPSS for Windows version 22, IBM Corporation, Armonk, NY, USA). The conformity of the parameters to normal distribution was evaluated using visual (histograms and probability plots) and analytical methods (Kolmogorov-Smirnov and Shapiro-Wilk's test). Since demographic characteristics and evaluated parameters were found to be not normally distributed, these parameters were given using median and interquartile range. Ordinal and nominal values obtained within the scope of the study were expressed as percentages (%). Maternal Spiritual Coping Scale, Psychological Resilience Scale and Parental Health Belief Scale scores of the participants' marital status (married, single), gender of their children with special needs (girl, boy), employment status (working, not working), mother's disability status (present, absent),

status of receiving a monthly allowance for a special child (receiving, not receiving) and finding the allowance sufficient (sufficient, not sufficient) were compared using Mann-Whitney U test. The effects of participants' age, marital status, number of children, number of children with special needs, gender of the child with special needs, time of diagnosis, mother's educational status, mother's employment status, mother's income status, consanguineous marriage, mother's disability status, receipt of special child monthly allowance and finding the allowance sufficient on the scores of the Maternal Spiritual Coping Scale, Psychological Resilience Scale and Parental Health Belief Scale were examined by multiple regression analysis. To verify the multicollinearity of the regression analyses, the VIF (variance inflation factor) was determined, which was below 10 for all indicators, proving that there was no strong correlation between the independent variables. Finally, the Durbin-Warson test was performed to determine whether there was autocorrelation among the residuals. The relationship between the numerical parameters was assessed by Spearman correlation analysis. P values below 0.05 were interpreted as statistically significant results.

Ethical Principles of the Study

Before starting the study, ethics committee approval was obtained from the Toros University Non-Interventional Ethics Committee (14.09.2023/25). Institutional permission was obtained from the institutions where the study was conducted and informed consent was obtained from the mothers who agreed to participate in the study.

RESULTS

Within the scope of the study, 376 mothers with children with special needs were evaluated. Descriptive characteristics of the mothers are shown in Table 1.

[**Please Table 1 insert here**]

According to the scale scores given by the mothers participating in the study, the median interquartile range of the maternal spiritual coping scale was 114.5 (103-119), the median interquartile range of the psychological resilience assessment scale was 30 (23-35), the median interquartile range of the parental health belief scale was 66 (59-72), the median interquartile range of the parental health belief scale-internal factors sub-dimension was 14 (12-15), the median interquartile range of the parental health belief scale-external factors sub-dimension was 33 (30-36), and the median interquartile range of the chance factors sub-dimension of the parental health belief scale was 19 (16-24) (Table 2).

[**Please Table 2 insert here**]

The effect of demographic characteristics on the Maternal Spiritual Coping Scale(MSCS), Psychological Resilience Assessment Scale (PRAS) and Parental Health Belief Scale (PHBS) and their sub-dimensions scores in mothers of children with special needs were examined separately.

When the effect on the MSCS was examined; it was found that the MSCS scores of university graduate mothers with children with special needs were lower than those of primary school ($p=0.002$), secondary school ($p<0.001$) and high school graduate mothers ($p<0.001$). The MSCS scores of non-working mothers ($p<0.001$) were found to be higher than those of working mothers. It was found that mothers who reported that their income was less than their expenses ($p=0.002$) had a higher level of MSCS than mothers who reported that their income was equal to their expenses (Table 3). When the effect of the scale on the mothers' Psychological Resilience Assessment Scale (PRAS) score was examined; it was found that the PRAS score of single mothers with children with special needs was higher than that of married mothers ($p=0.048$), while the PRAS score of unemployed mothers ($p=0.003$) was higher compared to working mothers. The PRAS score of primary school graduate mothers with children with special needs was found to be lower than that of middle school ($p=0.008$) and high school

graduate mothers (p=0.003). In addition, the PRAS (p=0.015) score of mothers with special needs children who reported that their income was less than their expenses was higher than that of mothers who reported that their income was equal to their expenses and than that of mothers whose income was greater than their expenses (p=0.004) (Table 3).

When the effect on the Parental Health Belief Scale score (PHBSS) was examined, the PHBS, PHBS-Internal Factors and PHBS-External Factors scores of the mothers whose children had a disability after birth were higher than the mothers whose children had a disability before or during birth (p<0.001). The Parental Health Belief Scale (PHBS) (p=0.508), PHBS-Internal Factors (p=0.165) and PHBS-External Factors (p=0.260) scores of the mothers whose children had a disability before or during birth were similar (Table 3). The PHBS-External factors score of university graduate mothers of children with special needs was higher than that of primary school graduates (p=0.007), secondary school graduates (p=0.003) and high school graduates (p=0.017) (Table 2). It was found that the PHBS (p=0.024), PHBS-Internal Factors (p<0.001) and PHBS-External Factors (p<0.001) scores of working mothers with children with special needs were lower than those of non-working mothers (Table 2). While the PHBS-External Factors scores of mothers with consanguineous marriages were lower than those of mothers without consanguineous marriages (p=0.049), the PHBS (p=0.331), PHBS-Internal Factors (p=0.194) and PHBS-Chance Factors (p=0.614) scores of both groups of mothers were similar (Table 4). While the PHBS-Internal Factors score of the mothers who found the monthly family allowance sufficient was lower than the group who found the monthly family allowance low (p=0.030), the PHBS (p=0.105), PHBS-External Factors (p=0.196) and PHBS-Chance Factors (p=0.496) scores of both groups of mothers were similar (Table 3).

[**Please Table 3 insert here**]

When the effects of the descriptive characteristics of the mother were examined, the Mother Spiritual Coping Scale (MSCS), Psychological Resilience Assessment Scale (PRAS), Parental

Health Belief Scale (PHBS), PHBS-Internal Factors, PHBS-External Factors and PHBS-Chance Factors scores and the adequacy of the assistance allowance were examined by multiple regression analysis, These parameters were found to explain 10.7% of the change in the Mother Spiritual Coping Scale, 13.9% of the change in the PRAS, 10.5% of the change in the PHBS total score, and 29.8% of the change in the PHBS-Chance Factors. It was found to explain 7% of the change in the Mother Spiritual Coping Scale, 13.9% of the change in the PRAS, 10.5% of the change in the PHBS total score, 29.8% of the change in the PHBS-Internal Factors score, 31.9% of the change in the PHBS-External Factors score and 10.3% of the change in the PHBS-Chance Factors score. It was found that the age of the mother ($p=0.031$) and PRAS scores ($p=0.005$) affected the change in the MSCS of the participants.The determinative parameters for the change in the PRAS score were found to be; mother's education status ($p<0.001$), mother's employment status ($p=0.004$), mother's income status ($p=0.026$), and the MSCS score ($p=0.005$). The determinative parameters for the change in the Parent Health Belief Scale (PHBS) score were found to be the age of the first child with special needs ($p=0.030$) and the time of diagnosis of the disabled child ($p<0.001$) (Table 4a). It was found that the determinative factors for PHBS-Internal Factors were PHBS-External Factors ($p<0.001$) and PHBS-Chance Factors ($p=0.007$). For PHBS-External Factors, the determinative factors were found to be the time of diagnosis ($p<0.001$), consanguineous marriage ($p=0.018$), and PHBS-Internal Factors ($p<0.001$). For the PHBS-Chance factors, the determining parameters were found to be the gender of the child with special needs ($p=0.039$), the educational status of the mother ($p=0.012$) and the PHBS-Internal Factors score ($p=0.007$) (Table 4b). Multicollinearity tests revealed that the VIF values of all indicators were below 10 and there was no strong linear relationship between the explanatory variables. In addition, the Durbin-Watson test results indicated that the D-W value was below 2, indicating that the error terms were not correlated with each other, that is, they were independent (Tables 4a, 4b).

[**Please Table 4a insert here**]

[Please Table 4b insert here]

When the relationship between the examined parameters was analyzed using correlation analysis, a negative relationship was found between the mother's age and the MSCS score (r=-0.114, p=0.028). It was found that there is no relationship between the number of children, the number of children with special needs, and the age of the first child with special needs and the scores of the scales used (p>0.05). In addition, a positive correlation was found between the MSCS score and the PRAS (r=0.296, p<0.001) and PHBS scores (r=0.309, p<0.001). Additionally, a positive relationship was found between the PRAS score and the PHBS scores (PHBS) (r=0.209, p<0.001) (Table 5). Additionally, a negative relationship was found between the MSCS score and the PHBS-External Factors (r=-0.110, p=0.032) (Table 5).

[**Please Table 5 insert here**]

Discussion

This study closely examined the effects of spiritual coping skills, psychological resilience, and health beliefs in mothers of children with special needs. Mothers of children with special needs who are university graduates have lower spiritual coping skills compared to those with only primary, middle, or high school education. This may be because university-educated mothers are more focused on their careers and other responsibilities, leaving them less time and attention for their children. This can increase stress and reduce their ability to cope with the challenges of raising a child with special needs. The many demands placed on them can hinder their coping skills in this situation [20]. In this research, it was seen that mothers with special comprehensive details showed higher spiritual performance characteristics than working mothers. In addition, the mother's age and spiritual structures also include her spiritual success characteristics.

Our study found that single mothers of children with special needs have higher psychological resilience than married mothers. Mothers with disabled children often face marital problems during this challenging time, which adds to their difficulties. Parents struggle to find time for their relationships because of the demands that come with having a child with special health care needs [21]. The study by Papp et al. (2004) found that poor marital adjustment negatively affects women's mental health more than men's [22]. The study by Lickenbrock et al. (2011) found that mothers with positive interactions with their spouses have higher levels of well-being [23]. Our study found that mothers of children with special needs who have an income less than their expenses show higher psychological resilience than those whose income meets or exceeds their expenses. In contrast to our findings, studies by Lloyd & Rosman and Nota et al. found that both living in poverty and having a child with special needs harm women's mental health [24, 25]. In our study, the strong psychological resilience of mothers with low income may be due to having a robust support network and the financial aid provided by the government or organizations for disadvantaged families. This support also helps them access healthcare services. Assistance from these larger systems can help families cope with challenges and maintain their psychological resilience [25]. Our study found that a mother's educational level, employment status, income, and spiritual coping skills all influence her psychological resilience.

Health belief focuses on motivating people to prevent diseases and disabilities and encouraging them to adopt healthier behaviors [26]. The study found that mothers whose children were diagnosed after birth had higher Parental Health Beliefs than those whose children were diagnosed before or during birth. It is believed that the notion of being able to manage the disease after birth enhances their sense of control and the influence of environmental factors on health behaviorsIn a qualitative study examining mothers of children with special needs, mothers generally believed that with enough effort during early childhood, disabilities could be

treated or developmental delays reduced, regardless of the child's health issues [27]. Developmental delay refers to delays in speech and language, motor skills, social skills, and cognitive development [28]. Late detection of developmental delays results in missed opportunities for early intervention, leading to negative outcomes like learning difficulties, behavioral issues, and functional impairments later in life [29]. Effective early diagnosis of developmental delays and timely early intervention can positively change a child's long-term course [30]. Early diagnosis and intervention for children with special needs are essential for improving their health development and readiness for school [31]. The social participation of a child with special needs can positively impact the mother's psychological resilience.

University graduate mothers of children with special needs had higher PHBS-external factors score, and mothers with primary school, middle school and high school graduates had higher health beliefs. Yu's study found that mothers with higher education levels are better able to help prevent and treat their children's diseases and disorders [32]. Other studies found that mothers with higher education levels positively affect their children’s nutrition, vaccination status, survival, and ability to cope with diseases [33-37]. Studies show similarities to our research, indicating that the educational status of mothers of children with special needs influences health beliefs related to PHBS-Chance factors. However, it suggests that mothers do not rely on chance for their children’s health. The study also found that the age of the first child and the timing of the diagnosis for the disabled child impact Parental Health Beliefs.

The timing of disease diagnosis and consanguineous marriage were found to influence parental health beliefs as external factors. This suggests that early diagnosis is viewed as crucial for treatment, and mothers' health beliefs are shaped by concerns about potential health issues in children from consanguineous marriages. In this study, while the gender of the child with special needs was considered a factor in mothers' health beliefs related to PHBS-Chance, no

significant difference was found between genders. Since all data were collected from mothers using rehabilitation services, it's clear that all participants had access to health services. The findings also show that a mother's spiritual coping skills positively impact her psychological resilience and parental health beliefs.

Conclusions and Recommendations

This study showed that spiritual coping skills of mothers of children with special needs have a significant effect on their psychological health and health beliefs about their children's health problems. In accordance with the findings:

- Spirituality is a strong support mechanism for mothers in the face of challenging life conditions,
- Psychological resilience is closely related to socioeconomic factors,
- Work life may have a negative impact on mothers' health beliefs, as working mothers have low health beliefs.

In this context, the following recommendations are offered:

- Community-based support programs should be developed to meet the spiritual and psychological support needs of mothers with children with special needs.
- Improvements should be made in social policy regulations, taking into account the effects of mothers' education level and economic status on psychological resilience.
- Since the time of diagnosis of a child's disability affects mothers' health beliefs, early diagnosis and intervention programs should be encouraged.
- In future studies, longitudinal studies should be prioritized to examine the long-term effects of these factors.

Limitations of the Study

This study has some limitations. The study has a cross-sectional design and was conducted only in a single time period. Therefore, the findings of the study only reflect the current situation and causality cannot be inferred. In addition, convenience sampling was used to collect the research data, which may limit the capacity of the sample to represent the general population. Since the study collected data only from mothers who applied to rehabilitation centers, parents who did not seek health services for their children were excluded. This suggests that the findings are limited to individuals who have access to health services. In addition, since the majority of children attending special education and rehabilitation centers are accompanied by their mothers, only mothers were selected as participants in this study, which may affect the homogeneity of the participant group.

Funding

No financial support was received from any person, institution or organisation for this study.

Decleration

This study was presented as an oral presentation at the 1st Interdisciplinary Special Education Congress (DOZEK2024) on December 6-8, 2024 and has not been published before.

References

1. Jones, J. and J. Passey, Family adaptation, coping and resources: Parents of children with developmental disabilities and behaviour problems. Journal on developmental disabilities, 2004. 11(1): p. 31-46.
2. Koyuncu, M., H. Gümüş, and E.Y. Bolat, Investigation of Recreation Area Participation Barriers of Families With Special Needs. International Journal of Disabilities Sports and Health Sciences. 7(3): p. 556-563.
3. Asa, G.A., et al., Psychological, sociocultural and economic coping strategies of mothers or female caregivers of children with a disability in Belu district, Indonesia. PloS one, 2021. 16(5): p. e0251274. https://doi.org/10.1371/journal.pone.0251274
4. Yilmaz, G., Spiritual orientation, meaning in life, life satisfaction, and well-being in mothers with disabled children. Journal of religion and health, 2019. 58(6): p. 2251-2262. https://doi.org/10.1007/s10943-019-00925-4

5. Białek, K., et al., Level of basic hope and symptoms of anxiety and depression in women after miscarriage. Archives of Medical Science: AMS, 2024. 20(1): p. 332.DOI: https://doi.org/10.5114/aoms/175504

6. Adams, D., et al., Coping strategies in mothers of children with intellectual disabilities showing multiple forms of challenging behaviour: Associations with maternal mental health. Behavioural and cognitive psychotherapy, 2018. 46(3): p. 257-275. https://doi.org/10.1017/S1352465817000704

7. Karaca, A. and D. Konuk Şener, Spirituality as a coping method for mothers of children with developmental disabilities. International Journal of Developmental Disabilities, 2021. 67(2): p. 112-120. https://doi.org/10.1080/20473869.2019.1603730

8. Aslan, G., E. Kant, and F. Gül Can, Investigation of the Relationship Between Spiritual Coping Styles and Hope Levels in Mothers with Disabled Children in Turkey. Journal of religion and health, 2023. 62(5): p. 3347-3363. https://doi.org/10.1007/s10943-023-01843-2

9. Koenig, H.G., Religion and mental health: Research and clinical applications. 2018: Academic Press.

10. Lucchetti, G., et al., Spirituality, religiosity and the mental health consequences of social isolation during Covid-19 pandemic. International Journal of Social Psychiatry, 2021. 67(6): p. 672-679. https://doi.org/10.1177/0020764020970996

11. McCullough, M.E. and B.L. Willoughby, Religion, self-regulation, and self-control: Associations, explanations, and implications. Psychological bulletin, 2009. **135**(1): p. 69. https://doi.org/10.1037/a0014213

12. Feudtner, C., et al., Good-parent beliefs of parents of seriously ill children. JAMA pediatrics, 2015. 169(1): p. 39-47.

13. Gözüm, S. and C. Çapık, Sağlık davranışlarının geliştirilmesinde bir rehber: sağlık inanç modeli. Dokuz Eylül Üniversitesi Hemşirelik Fakültesi Elektronik Dergisi, 2014. **7**(3): p. 230-237.

14. Elsobkey, F.A., Mothers' health education based on health belief model to promote health of preterm infant related to sudden infant death syndrome. American Journal of Nursing, 2018. 6(4): p. 164-173. DOI:10.12691/ajnr-6-4-4

15. Sekaran, U. and R. Bougie, Research methods for business: A skill building approach. 2016: john wiley & sons.

16. Yaman, K.G., et al., Maternal spiritual coping scale: Development and Validation. Spiritual Psychology and Counseling, 2018. 3(1): p. 9-21. DOI 10.12738/spc.2018.1.0042

17. Türkkan, T., K. Bülbül, and H. Odacı, Psikolojik sağlamlığı değerlendirme ölçeği: Türkçe versiyonuna ilişkin ilk psikometrik bulgular. Yükseköğretim ve Bilim Dergisi, 2022. 12(2): p. 255-263. https://doi.org/10.5961/higheredusci.897574

18. Sunmaz Dilek and B. Günsel, Ebeveyn sağlık inanç ölçeğinin Türkiye'deki geçerlilik ve güvenirlik çalışması. 2003, Dokuz Eylül Üniversitesi Sağlık Bilimleri Enstitüsü.

19. Amen, M.M. and V.P. Clarke, The Influence Of Mothers'health Beliefs on Use of Preventive Child Health Care Services and Mothers' Perception Of Children's Health Status. Issues in Comprehensive Pediatric Nursing, 2001. 24(3): p. 153-163.

20. Manor-Binyamini, I., Mothers of children with developmental disorders in the Bedouin community in Israel: Family functioning, caregiver burden, and coping abilities. Journal of autism and developmental disorders, 2011. 41(5): p. 610-617. DOI 10.1007/s10803-010-1080-1

21. Cauda-Laufer, N., Raising a child with a disability: Coping mechanisms and support needs. 2017.

22. Papp, L.M., M.C. Goeke-Morey, and E.M. Cummings, Mothers' and fathers' psychological symptoms and marital functioning: Examination of direct and interactive links with child adjustment. Journal of Child and Family Studies, 2004. 13: p. 469-482.

23. Lickenbrock, D.M., N.V. Ekas, and T.L. Whitman, Feeling good, feeling bad: Influences of maternal perceptions of the child and marital adjustment on well-being in mothers of children with an autism spectrum disorder. Journal of autism and developmental disorders, 2011. 41: p. 848-858. DOI: 10.1007/s10803-010-1105-9

24. Lloyd, C.M. and E. Rosman, Exploring mental health outcomes for low-income mothers of children with special needs: Implications for policy and practice. Infants & Young Children, 2005. 18(3): p. 186-199.

25. Nota, A., et al., Factors contributing to defaulting scheduled therapy sessions by caregivers of children with congenital disabilities. Malawi medical journal, 2015. 27(1): p. 25-28. DOI:10.4314/mmj.v27i1.7

26. Yeniyapı, A. and M. Tokur Kegin, Anaokulu Çocuklarının Annelerinin Ev Kazalarına Yönelik Aldıkları Güvenlik Önlemleri ile Sağlık İnancı Arasındaki İlişki: Kesitsel ve Korelasyonel Çalışma. Turkiye Klinikleri Journal of Nursing Sciences, 2023. 15(1). DOI: 10.5336/nurses.2022-90565

27. Park, H.J. and G.H. Chung, A multifaceted model of changes and adaptation among Korean mothers of children with disabilities. Journal of Child and Family Studies, 2015. 24: p. 915-929. DOI 10.1007/s10826-014-9902-y

28. Demirci, A. and M. Kartal, The prevalence of developmental delay among children aged 3–60 months in Izmir, Turkey. Child: care, health and development, 2016. 42(2): p. 213-219. https://doi.org/10.1111/cch.12289

29. Shevell, M., et al., Developmental and functional outcomes at school age of preschool children with global developmental delay. Journal of child neurology, 2005. 20(8): p. 648-654. https://doi.org/10.1177/08830738050200080301

30. Scherzer, A.L., et al., Global perspective on early diagnosis and intervention for children with developmental delays and disabilities. Developmental Medicine & Child Neurology, 2012. 54(12): p. 1079-1084. https://doi.org/10.1111/j.1469-8749.2012.04348.x

31. Olusanya, B.O., et al., Disabilities in Early Childhood: A Global Health Perspective. Children, 2023. 10(1): p. 155. https://doi.org/10.3390/children10010155

32. Yu, S., The influence of mothers' educational level on children's comprehensive quality. Journal of Education, Humanities and Social Sciences, 2023. 8: p. 1264-1272. DOI: https://doi.org/10.54097/ehss.v8i.4461

33. Banu, B. and K. Khanom, Effects of education level of father and mother on perceptions of breastfeeding. Journal of Enam Medical College, 2012. 2(2): p. 67-73.

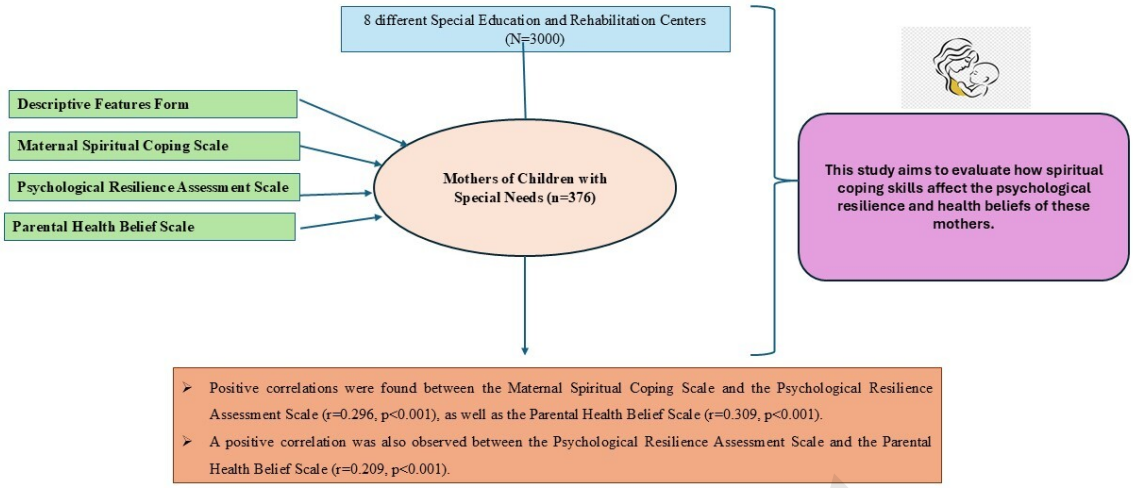
34. Bhuiya, A. and K. Streatfield, Mothers' education and survival of female children in a rural area of Bangladesh. Population studies, 1991. 45(2): p. 253-264. https://doi.org/10.1080/0032472031000145426

35. Das Gupta, M., Death clustering, mothers' education and the determinants of child mortality in rural Punjab, India. Population studies, 1990. 44(3): p. 489-505. https://doi.org/10.1080/0032472031000144866

36. Giannakou, K., et al., Knowledge of mothers regarding children's vaccinations in Greece: an online cross-sectional study. BMC Public Health, 2021. 21: p. 1-13. https://doi.org/10.1186/s12889-021-12179-5

37. Shalaby, H., et al., Health education role in promoting mothers' beliefs, knowledge and practice of exclusive breastfeeding among King Fahd Armed Forces Hospital population. Int J Community Med Public Health, 2019. 6(5): p. 1853.

The Effect of Spiritual Coping Skills on Psychological Resilience and Health Beliefs of Mothers with Children with Special Needs



- Positive correlations were found between the Maternal Spiritual Coping Scale and the Psychological Resilience Assessment Scale ($r=0.296$, $p<0.001$), as well as the Parental Health Belief Scale ($r=0.309$, $p<0.001$).
- A positive correlation was also observed between the Psychological Resilience Assessment Scale and the Parental Health Belief Scale ($r=0.209$, $p<0.001$).

Table 1. Descriptive features

Variables		n	(%)
Average Age of Mothers: 38 years			
Average Age of First Child with Special Needs:8 years			
Marital Status	Married	**339**	**90.2**
	Single	37	9.8
Number of Children with Special Needs	1 child	**335**	**89.1**
	2 children	36	9.6
	3 children	5	1.3
Gender of the child with special needs	Girl	175	46.5
	Boy	**201**	**53.5**
Time of Diagnosis	Before birth	45	12
	At birth	45	12
	After birth	**286**	**76.1**
Education Status of the Mother	Illiterate	2	0.5
	Primary school	115	30.6
	Secondary school	106	28.2
	High school	**117**	**31.1**
	University	36	9.6
Employment Status of the Mother	Working	40	0.6
	Not working	**336**	**89.4**
Consanguineous Marriage	Have	107	28.5
	Does not have	**269**	**71.5**
Disability status of the mother	Have	8	2.1
	Don't have	**368**	**97.9**
Status of receiving a monthly family allowance for children with special needs	Receive	**201**	**53.5**
	Does not receive	175	46.5
Situation of finding the monthly family allowance sufficient	Sufficient	23	6.1
	Insufficient	**178**	**47.3**

Table 2. Scale scores

Scale scores	**Median interquartile range**	**Min.-Max.**
Maternal Spiritual Coping Scale (Score)	**114.5 (103-119)**	**24-120**
Psychological Resilience Assessment Scale (Score)	**30** (23-35)	**0-36**
Parental Health Belief Scale (Score)	**66** (59-72)	**26-99**
Parental Health Belief Scale-Internal factors	**14** (12-15)	**3-18**
Parental Health Belief Scale-External factors	**33** (30-36)	**10-42**
Parental Health Belief Scale-Chance factors	**19** (16-24)	**7-42**

Table 3. Statistical analysis results of the effects of demographic characteristics on the scores of the mother spiritual coping scale, the psychological resilience assessment scale, and the parent health belief scale

Parameters		Maternal Spiritual Coping Scale	Psychological Resilience Assessment Scale	Parental Health Belief Scale	Internal Factors	External Factors	Chance Factors
Marital Status	Married	115 (103-119)	30 (23-35)	66 (59-72)	14 (11-15)	33 (30-35)	19 (16-24)
	Single	110 (96-117)	33 (28-36)	67 (62-73)	15 (12-17)	34 (30-37)	20 (16-24)
	p	0.052	**0.048** *	0.574	0.413	0.576	0.887
Number of Children with Special Needs	1 child	115 (103-119)	30 (23-35)	66 (59-72)	14 (11-15)	33 (29-35)	20 (16-24)
	2 children	109.5 (101-116)	28.5 (15-34)	69 (64-74)	15 (13-15)	35 (33-37)	19 (16-23)
	3 children	114 (113-116)	33 (30-33)	64 (61-69)	15 (12-16)	32 (29-35)	14 (13-20)
	p	0.136	0.3	0.109	0.094	0.069	0.346
Gender of the child with special needs	Girl	114 (106-119)	32 (23-35)	66 (59-72)	14 (11-15)	34 (30-35)	19 (16-23)
	Boy	115 (100-119)	30 (23-35)	66 (60-72)	14 (12-15)	33 (29-36)	20 (16-24)
	p	0.574	0.453	0.718	0.622	0.444	0.081
Time of Diagnosis	Before birth	112 (100-118)	29 (20-34)	70 (65-78)	15 (14-16)	35 (33-38)	20 (17-24)
	At birth	116 (99-120)	32 (24-36)	70 (65-74)	15 (13-15)	35 (33-35)	20 (16-24)
	After birth	115 (103-119)	30 (23-35)	64 (58-71)	13 (11-15)	32 (29-35)	19 (16-24)
	p	0.234	0.317	**<0.001** *	**<0.001** *	**<0.001** *	0.267
Education Status of the Mother	Illiterate	113 (110-116)	32 (31-33)	68 (60-76)	15 (13-16)	35 (31-39)	19 (16-21)
	Primary school	115 (103-119)	27 (17-34)	68 (60-73)	13 (11-15)	33 (29-35)	20 (17-24)
	Secondary school	116 (104-120)	32 (25-35)	64 (58-71)	14 (11-15)	33 (29-35)	19 (16-23)
	High school	115 (106-119)	31 (26-36)	66 (59-72)	14 (12-15)	33 (30-36)	20 (16-23)
	University	104.5 (86-114)	30 (25.5-33.5)	67 (61-73)	15 (13-18)	36 (32-38)	17 (13-23)
	p	**0.009***	**0.024***	0,467	0,118	**0.043** *	0.058
Employment Status of the Mother	Working	104.5 (84-114)	25.5 (14,5-33,5)	67 (64-75)	16 (13-18)	37 (34-38)	18 (15-23)
	Not working	116 (105.5-119)	30 (23.5-35)	66 (59-72)	14 (11-15)	33 (29-35)	19 (16-24)
	p	**<0.001** *	**0.019** *	**0.024** *	**<0.001** *	**<0.001** *	0.131
Mother's Income Status	Income is less than expenses	116 (107,5-120)	32 (24-36)	66 (59-72)	13 (12-15)	32 (29-35)	19 (16-24)
	Income is equal to expense	113 (93-118)	28 (23-34)	67 (60-73)	15 (11-16)	34 (29-37)	20 (16-24)
	Income is more than expense	112 (101-118)	27 (16-32)	66 (61-72)	14 (12-15)	34 (31-35)	17 (16-23)
	p	**0.006***	**0.003***	0.493	0.419	0.192	0.628
Consanguineous Marriage	Have	115 (105-119)	30 (23-34)	65 (58-72)	15 (12-15)	32 (29-35)	19 (16-23)
	Does not have	114 (23-34)	30 (23-35)	66 (60-73)	14 (11-15)	34 (30-36)	20 (16-24)
	p	0.525	0.974	0.321	0.194	**0.049** *	0.614
Disability status of the mother	Have	115 (102,5-119)	30 (23-35)	68 (55-73)	12 (11-15)	34 (30-35)	21 (16-24)
	Does not have	112 (109-118)	34 (29-36)	66 (59-72)	14 (12-15)	33 (30-36)	19 (16-24)
	p	0.962	0.198	0.847	0.305	0.756	0.773
Status of receiving a monthly family allowance for children with special needs	Receive	115 (104-119)	30 (24-35)	66 (59-72)	14 (11-15)	33 (29-35)	20 (16-24)
	Does not receive	114 (101-119)	29 (20-34)	66 (59-72)	14 (12-16)	33 (31-37)	19 (16-23)
	p	0.444	**0.043** *	0.806	0.517	0.191	**0.041** *
Situation of finding the monthly family allowance sufficient	Sufficient	115.5 (107-119)	31 (24-35)	66 (59-72)	14 (11-15)	33 (29-35)	20 (16-24)
	Insufficient	109 (97-120)	30 (24-34)	71 (62-75)	15 (13-17)	35 (29-37)	22 (16-25)
	p	0.192	0.465	0.105	**0.030** *	0.196	0.496

* $p<0.05$, Mann-Whitney U test; * $p<0.05$, Kruskal Wallis test.

Table 4a. Regression analysis

Parameters	Maternal Spiritual Coping Scale				Psychological Resilience Assessment Scale				Parental Health Belief Scale			
	B	β	*p*	VIF	B	β	*p*	VIF	B	β	*p*	VIF
Age of mother	**-0.32**	**-0.15**	**0.031**	1.9	0.05	0.05	0.508	1.92	0.1	0.08	0.232	1.90
Marital Status	-4.74	-0.08	0.149	1.09	3.16	0.09	0.068	1.09	1.09	0.03	0.552	1.10
Number of Children	0.24	0.02	0.737	1.31	-0.14	-0.02	0.709	1.31	-0.34	-0.05	0.389	1.30
Number of Children with Special Needs	2.08	0.04	0.456	1.19	-1.34	-0.05	0.364	1.19	2.71	0.1	0.079	1.16
Age of first child with special needs	-0.1	-0.03	0.622	1.90	0.16	0.11	0.118	1.89	**-0.24**	**-0.15**	**0.030**	1.87
Gender of the child with special needs	-1.56	-0.04	0.428	1.10	0.00	0.00	0.999	1.10	2.08	0.1	0.058	1.09
Time of Diagnosis	1.96	0.07	0.190	1.20	0.06	0.00	0,935	1.21	**-3.90**	**-0.3**	**<0.001**	1.11
Education Status of the Mother	-1.84	-0.1	0.101	1.42	**2.44**	**0.24**	**<0.001**	1.37	-0.29	-0.03	0.646	1.40
Employment Status of the Mother	5.66	0.09	0.105	1.32	**5.25**	**0.16**	**0.004**	1.30	-3.07	-0.09	0.112	1.30
Mother's Income Status	-0.97	-0.03	0.537	1.19	**-1.84**	**-0.12**	**0.026**	1.18	-0.19	-0.01	0.832	1.19
Consanguineous Marriage	-2.22	-0.05	0.319	1.16	0.16	0.01	0.895	1.16	1.02	0.04	0.410	1.14
Disability status of the mother	4	0.03	0.548	1.05	2.99	0.04	0.394	1.05	-5.92	-0.08	0.110	1.05
Status of receiving a monthly family allowance for children with special needs	11.33	0.30	0.171	19.44	-3.63	-0.18	0.407	19.51	-5.24	-0.25	0.257	19.40
Situation of finding the monthly family allowance sufficient	-5.66	-0.29	0.187	19.75	0.91	0.09	0.690	19.84	2.62	0.24	0.257	19.70
Maternal Spiritual Coping Scale	-	-	-		**0.08**	**0.15**	**0.005**	1.1	-0.01	-0.01	0.862	1.12
Psychological Resilience Assessment Scale	**0.28**	**0.15**	**0.005**	1.14	-	-	-		0.09	0.01	0.886	1.15
Parental Health Belief Scale	-	-	-		-	-	-		-	-	-	
Parental Health Belief Scale-Internal factors	-0.11	-0.02	0.759	1.42	0.06	0.33	0.739	1.42	-	-	-	
Parental Health Belief Scale-External factors	-0.04	-0.01	0.851	1.47	-0.14	-1.26	0.210	1.46	-	-	-	
Parental Health Belief Scale-Chance factors	0.05	0.01	0.782	1.11	0.11	1.26	0.209	1.11	-	-	-	
Durbin-Watson value	1.944				1,963				1,931			
R2	0.107				0.139				0.105			

Table 4b. Regression analysis

Parameters	Parental Health Belief Scale-Internal factors				Parental Health Belief Scale-External factors				Parental Health Belief Scale-Chance factors			
	B	β	*p*	VIF	B	β	*p*	VIF	B	β	*p*	VIF
Age of mother	0.03	0.10	0.155	1.91	0.02	0.03	0.578	1.92	-0.02	-0.03	0.685	1.92
Marital Status	0.11	0.01	0.828	1.10	0.07	0.00	0.935	1.10	0.54	0.03	0.616	1.10
Number of Children	0.12	0.10	0.290	1.30	-0.23	-0.06	0.209	1.30	-0.19	-0,05	0.409	1.31
Number of Children with Special Needs	0.54	0.06	0.211	1.19	1.36	0.09	0.058	1.18	-0.90	-0.05	0.327	1.20
Age of first child with special needs	-0.05	-0.10	0.093	1.88	-0.01	-0.01	0.858	2.0	-0.07	-0.08	0.280	1.89
Gender of the child with special needs	0.28	0.04	0.368	1.10	-0.17	-0.02	0.730	1.10	**1.32**	**0.11**	**0.039**	1.09
Time of Diagnosis	-0.30	-0.06	0.193	1.20	**-1.54**	**-0.19**	**<0.001**	1.15	-0.30	-0.03	0.540	1.21
Education Status of the Mother	0.33	0.10	0.061	1.42	0.01	0.00	0.987	1.43	**-0.91**	**-0.15**	**0.012**	1.41
Employment Status of the Mother	-0.73	-0.10	0.177	1.32	-1.60	-0.10	0.076	1.32	1.33	0.07	0.242	1.33
Mother's Income Status	-0.23	-0.05	0.349	1.19	0.01	0.00	0.983	1.19	0.32	0.03	0.536	1.19
Consanguineous Marriage	-0.69	-0.09	0.048	1.15	**1.36**	**0.11**	**0.018**	1.14	0.32	0.02	0.656	1.16
Disability status of the mother	-0.77	-0.03	0.459	1.05	-1.90	-0.05	0.267	1.05	-0.44	-0.01	0.841	1.05
Status of receiving a monthly family allowance for children with special needs	-1.80	-0.27	0.162	19.44	0.71	0.06	0.740	19.54	-1.40	-0.12	0.603	19.53
Situation of finding the monthly family allowance sufficient	0.94	0.30	0.159	19.74	0.08	0.01	0.945	19.85	0.02	0.00	0.992	19.85
Maternal Spiritual Coping Scale	-0.00	-0.01	0.759	1.12	-0.00	-0.01	0.851	1.12	0.01	0.02	0.782	1.12
Psychological Resilience Assessment Scale	0.01	0.02	0.739	1.16	-0.03	-0.05	0.210	1.16	0.04	0.07	0.209	1.16
Parental Health Belief Scale	-	-	-		-	-	-		-	-	-	
Parental Health Belief Scale-Internal factors	-	-	-		**0.71**	**0.42**	**<0.001**		**0.30**	**0.16**	**0.01**	
Parental Health Belief Scale-External factors	**0.258**	**0.433**	**<0.001**		-	-	-		0.08	0.07	0.30	
Parental Health Belief Scale-Chance factors	**0.067**	**0.125**	**0.007**		0.05	0.05	0.246		-	-	-	
Durbin-Watson value	1.989				1.962				1.911			
R2	0.30				0.32				0.10			

Table 5. Correlation analysis

Parameters	Maternal Spiritual Coping Scale		Psychological Resilience Assessment Scale		Parental Health Belief Scale		Parental Health Belief Scale-Internal factors		Parental Health Belief Scale-External factors		Parental Health Belief Scale-Chance factors	
	r	p	r	p	r	p	r	p	r	p	r	p
Age of mother	**-0.114**	**0.028**	- 0.011	0.836	-0.005	0.930	0.010	0.842	0.066	0.199	-0.084	0.104
Number of Children	-0.025	0.631	-0.081	0.116	-0.020	0.701	0.054	0.300	-0.057	0.269	-0.064	0.212
Number of Children with Special Needs	-0.092	0.076	-0.053	0.309	0.092	0.076	**0.112**	**0.030**	**0.109**	**0.034**	-0.039	0.451
Age of first child with special needs	-0.020	0.703	0.088	0.088	**-0.103**	**0.045**	-0.069	0.183	-0.052	0.312	-0.082	0.112
Maternal Spiritual Coping Scale			**0.296**	**<0.001**	-0.051	0.328	-0.100	0.052	**-0.110**	**0.032**	0.062	0.234
Psychological Resilience Assessment Scale					-0.013	0.795	-0.063	0.223	-0.087	0.092	0.071	0.169
Parental Health Belief Scale							**0.622**	**<0.001**	**0.708**	**<0.001**	**0.673**	**<0.001**
Parental Health Belief Scale-Internal factors									**0.485**	**<0.001**	**0.119**	**0.021**
Parental Health Belief Scale-External factors											0.093	0.072