International Journal of Integrative Pediatrics and Environmental Medicine, V9, 2024

Original research

RESILIENCE IN MOTHERS HAVING CHILDREN WITH DISABILITIES AND BEHAVIOR PROBLEMS: A SURVEY-BASED COMMUNITY STUDY

Santhi Muttipoll Dharmarajlu[1*], Ashwaq Mohammed Shawlan[2], Taif Madani Suhaqi[2], Manahel Yahya Ageeli[2], Samira Ahmad Suhail[2], Dua Muhammad Al Ali[2], Rahgeed Jamil Hobani[2] & Samar Ahmed Abutaleb[2]

Author information: [1]Department of Nursing, College of Nursing and Health Sciences, Jazan University, Jazan, Kingdom of Saudi Arabia, [2]Third-year Nursing students, Department of Nursing, College of Nursing and Health Sciences, Jazan University, Jazan, Kingdom of Saudi Arabia.

Received: 08-28-2024; Accepted: 11-18-2024; Published: 11-25-2024

Abstract: This research aimed to examine the resilience exhibited by families who are raising children with behavioral issues and disabilities. In a developing society and community with limited rehabilitation and care services, there are major challenges for mothers with disabled children, and the responsibility for a child's growth falls solely on the shoulders of the mother or caregivers. Understanding the resilience of mothers (caregivers) is becoming more important as a process in disabilities for quality development and caring of children with disabilities. Purposive sampling was used to choose 30 samples from a descriptive cross-sectional survey design. Participants completed the Family Life Survey. It included questions about family-level results, social-ecological resources, and behavioral issues with children. High levels of social support and little financial difficulty are conducive to the "good" behavior of families with children who have disabilities and behavioral issues. On the other hand, even in cases where the quantity or severity of behavioral issues in children is minimal, families with inadequate social support and significant financial difficulties generally face difficulties. The study's results support the theory that "resilience" is more closely related to the accessibility and availability of culturally relevant resources than inborn traits or familial or individual characteristics. Almost all resilience items received a maximum response rate of almost 60% from mothers who answered "true" almost always. Approximately 40% of mothers scored poorly on all parts of the rating scale regarding resilience. Children with a severe deficit in their developmental behavior, as shown by the overall mean score of 37.57±3.401 on the Developmental Behavior Checklist and the overall mean score of Connor-Davidson. According to the resilience scale, mothers of children with impairments and behavioral issues had moderately high resilience scores. In terms of the effects on families, improving social ties and easing financial stress might be more crucial than changing behavior**.**

Keywords: Children, behavioral, disabilities, pediatrics.

INTRODUCTION According to the International Classification of Functioning, Disability and Health (ICF), "children with disabilities" are characterized as having impairments, activity limitations, participation restrictions, or disadvantages (WHO, 2007) [1]. A child's impairment impacts the family system and all its components, which could seriously undermine the family's integrity and structure and cause adjustments to roles, behaviors, and adaptability [2]. Numerous studies' findings suggest that families with disabled children experience higher levels of stress than other families because of the parents' limited time, energy, financial situation, emotions, and potential inadequacy in meeting their children's needs, in addition to their poorer physical and mental health [3-5]. These illnesses have an impact on their quality of life [6]. The women experience difficulties

***Corresponding author:** Santhi Muttipoll Dharmarajlu, MD, Assistant Professor, Department of Nursing, College of Nursing and Health Sciences, Jazan University, Jazan, Kingdom of Saudi Arabia
Email: santhi_pooja@gmail.com, srajalu@jazanu.edu.sa

in their social and familial lives when they have a disabled child. These mothers' inner struggles, imbalances, and feelings of despair and anxiety are caused by their psychological and physical burdens [3]. The quality of life may suffer as a result of parents' rising anxiety and depression levels [7]. Taking care of a disabled child can take up much of a parent's time, particularly if the child has serious disabilities. This can limit the parent's social life and prevent them from participating in other activities, which lowers their quality of life [8]. According to the World Health Organization, quality of life is multifaceted and influenced by various factors such as an individual's beliefs, social relationships, physical attributes, goals, standards, and individual perceptions of life [9-10]. Low life quality impacts coping strategies, family dynamics, and individual adaptations, which makes people less able to cope and escalates conflict [11, 12]. Enhanced resilience is one of the psychological interventions that can raise one's quality of life [13]. The ability to bounce back positively and achieve personal mastery, build self-efficacy and hope, and overcome traumatic life events—like raising a child with a chronic disability—is known as resilience [14].

Mothers of children with disabilities sense a significant caregiving load since they are less resilient, and their overall health and quality of life are significantly impacted. To deal with their children's disabilities and to keep their mental and physical health intact, these mothers require emotional support as well as psychological and psychosocial assistance [5]. A rise in resilience lowers stress and mental strain, supports mental health, raises well-being indicators, and enhances quality of life [16–21].

Resilience is an individual process that enhances the survival and defense mechanisms triggered by larger systems, enabling humans to handle adversity effectively [22]. More resilient people can handle life's challenges more effectively, feel less burdened, and exhibit greater adaptability. Their quality of life would, therefore, be improved [23].

Furthermore, data associates official and informal social support with mother and family outcomes [24-36]. For example, Davis and Gavidia-Payne (2009) discovered that in a sample of families receiving early childhood intervention services, parent perceptions of professional support (i.e., perceived family-centeredness) and satisfaction with informal support from friends and family were significant predictors of family quality of life along with child behavior problems. Similar findings were made by another study, which showed that perceived social support was a better indicator of changes in mothers of young adults with ASD's well-being over 18 months than the influence of behavioral issues [37].

Social-ecological factors have received less academic attention; however, strong evidence links socioeconomic status to maternal outcomes [38–45]. For instance, Emerson *et al.* (2006) performed a secondary analysis of data from the Families and Children Study of the United Kingdom Department for Work and Pension. They discovered no statistically significant difference in happiness between mothers of children with and without early cognitive delay when socioeconomic position, household composition, and maternal characteristics (e.g., age, marital status) were considered. In a similar vein, the study examined data from the Longitudinal Study of Australian Children and discovered that mothers of children at risk for impairment experienced an enhanced risk of distress and psychiatric disorder that was almost 50% explained by greater exposure to poverty [40].

"The protective variables and processes or systems that lead to a positive outcome despite exposure to stressors that have caused an increase in the risk of psychosis" is the definition of resilience, which is the capacity to adapt favorably or maintain or restore mental health in the face of adversity [46, 47]. Psychologists refer to people who maintain composure in the face of difficulty as resilient. When faced with hardship, tragedy, or a serious threat, resilient people can use their special skills and dynamic capacity to adapt to overcome life's challenges. According to De Terte and Stephens, psychological resilience is the capacity to quickly control one's thoughts, feelings, and behavior to return to one's pre-crisis state [48].

Numerous studies have examined the relationship between resilience and quality of life, focusing on specific disabilities such as cerebral palsy, intellectual disability, behavioral issues, and others [49-53]. However, only a small number of studies have examined the resilience and quality of life of mothers raising disabled children. On the other hand, cultures can impact how parents view difficult circumstances and how outside influences affect

resilience, which can have a differential impact on parents' quality of life [54]. The purpose of this study was to compare the quality of life and resilience of mothers with neurotypically developing children and mothers with disabled children in Farasan. This study hypothesized that mothers with disabled children had different quality of life and resilience than mothers with neurotypically developing children and that the results would support mothers with disabled children and lead to necessary interventions for mothers.

METHODS

Research Design. The research design selected for this study was a descriptive cross-sectional survey designed to assess the resilience of mothers having children with disabilities and behavior problems. It was a survey-based community study in both the Farasan and Jazan regions of KSA.

Research Approach: Quantitative survey approach.

Research setting: The study was carried out in both Farasan island and Jazan region, KSA.

Research Participants: The population for the present study was the mothers having children with disabilities and behavior problems in both the Farasan and Jazan regions, KSA.

Sample & Sample Size: Mothers having children with disabilities and behavior problems. The sample size was 30.

Sampling Technique: The nonprobability purposive sampling technique, chosen for its thoroughness and precision, was used for this study.

Criteria for sample selection:

Inclusion Criteria:

- Mothers having children with disabilities and behavior problems.
- Mothers having children with age range from 4-18 yrs
- Mothers can read and write Arabic.
- Willing to participate.

Exclusion Criteria:

- Mothers having children with disabilities other than behavioral problems.

Data Collection Instruments

- Semi-structured interview schedule on demographic variables of Mothers such as age, education, number of children, occupation, income, child's age, type of family, total number of family members, type of disability, level of disability, sex of the child, child's place of residence and sources of medical expenses.
- In the short form of the Developmental Behavior Checklist (DBC-24), the Likert scale measures behavior problems in children with disabilities between 4 and 18 years of age. It contained 24 questions with three categories: Not true as far as I know(s) has a 0 score, Somewhat or sometimes true -1 score, and Very true or Often true - 2 score.
- The CD-RISC contains 25 items, all of which carry a 5-point range of responses, as follows: not true at all (0), rarely true (1), sometimes true (2), often true (3), and true nearly all of the time (4). The scale is rated based on how the subject has felt over the past month. The total score ranges from 0–100, with higher scores reflecting greater resilience.

Data Collection Procedure:

- Permission was obtained from the dean of the nursing college.
- For mothers selected by inclusion criteria, informed consent was obtained.
- The five categories of the Likert scale on the Quality of Life questionnaire were used to assess the quality of life of mothers having children with disabilities and behavior problems.
- The five-point scale on CD-RISC to assess the level of resilience.
- Education was given to mothers who are having children with disabilities and behavior problems.

Statistical Analysis:

- Both descriptive and inferential statistics were used for this study. The mean, standard deviation, and mean percentage were used to assess the resilience of mothers with children with disabilities and behavior problems.
- Chi-square was used to assess the association between scores and demographic variables.
- Correlation and coefficient were used to identify the difference between the psychological impact and the resilience in mothers having children with disabilities and behavior problems.

RESULTS The highest percentage of respondents were (40%) 20-30 years old, and the lowest percentage (7%) of respondents were in the age group of 18-20 years. The highest percentage of respondents (90%) are married, while the lowest percentage (3%) are widowers. The highest percentage of respondents (63%) have a bachelor's degree, and the lowest percentage (4%) have a master's degree.

S. No	Categories	Not true as far as I know(s) 0		Somewhat or sometimes true 1		Very true or often true 2	
		Frequency	%	Frequency	%	Frequency	%
1	The child becomes overexcited	8	26.7	9	30	10	33.3
2.	The child chews or mouths objects or body parts	0	0	6	20	24	80
3.	The child confuses the use of pronouns (e.g., uses you instead of I)	0	0	5	16.7	19	63.3
4	The child doesn't show affection	3	10	7	23.3	11	36.7
5	The child grinds their teeth	3	10	19	63.3	7	23.3
6	The child has nightmares, night terrors, or walks in sleep	3	10	9	30	18	60
7	The child is impatient	4	13.3	14	46.7	12	40
8	The child has Inappropriate sexual activity with another	27	90	3	10	0	0
9	The child is jealous	2	6.7	11	36.7	17	56.6
10	The child kicks or hits others	0	0	6	20	24	80
11	The child laughs or giggles for no obvious reason	2	6.7	11	36.7	17	56.6
12	The child is preoccupied with only one or two particular interests	5	16.7	13	43.3	12	40
13	The child refuses to go to school, activity centre, or workplace	0	0	12	40	18	60
14	The child repeats the same word or phrase over and over	2	6.7	9	30	19	63.3
15	The child smells, tastes, or licks objects	0	0	10	33.3	20	66.7
16	The child switches light on and off, pours water over and over, or similar repetitive behaviour	0	0	17	56.7	13	43.3
17	The child is stubborn, disobedient, or uncooperative	7	23.3	14	46.7	9	30
18	The child says he/she can do things that he/she is not capable of	4	13.4	13	43.3	13	43.3
19	The child sees, and hears, something that isn't there, hallucinations	4	13.3	14	46.7	12	40
20	The child tells lies	6	20	21	70	3	10
21	The child is tense, anxious, worried	0	0	17	56.7	13	43.3
22	The child underreacts to pain	0	0	19	63.3	11	36.7
23	The child is upset or distressed over small changes in routine or environment	0	0	14	46.7	16	53.3
24	The child wanders aimlessly	0	0	23	76.7	7	23.3

Table 1. Likert scale on the short form of the Developmental Behaviour Checklist (DBC-24), to measure behaviour problems in children with disabilities between 4–18 years of age

S. No	Categories	Not true at all 0		Rarely true 1		Sometimes true 2		Often true 3		True nearly all the time 4	
		F	%	F	%	F	%	F	%	F	%
1	Able to adapt to change	2	6.7	5	16.7	9	30	13	43.3	1	3.3
2.	Close and secure relationships	0	0	2	6.7	8	26.7	7	23.3	13	43.3
3.	Sometimes fate or God can help	0	0	0	0	6	20	9	30	15	50
4	Can deal with whatever comes	0	0	4	13.3	10	33.3	8	26.7	8	26.7
5	Past success gives confidence for new challenges	1	3.3	3	10	7	23.4	10	33.3	9	30
6	See the humorous side of things	0	0	4	13.3	6	20	12	40	8	26.7
7	Coping with stress strengthens	0	0	8	26.7	10	33.3	12	40	0	0
8	Tend to bounce back after illness or hardship	4	13.3	9	30	11	36.7	6	20	0	0
9	Things happen for a reason	0	0	6	20	13	43.3	8	26.7	3	10
10	Best effort no matter what	0	0	5	16.7	11	36.7	10	33.3	4	13.3
11	I can achieve my goals	0	0	4	13.3	13	43.4	7	23.3	6	20
12	When things look hopeless, I don't give up	0	0	8	26.7	9	30	13	43.3	0	0
13	Know where to turn for help	0	0	4	13.3	5	16.7	11	36.7	10	33.3
14	Under pressure, focus and think clearly	7	23.3	9	30	11	36.7	3	10	0	0
15	Prefer to take the lead in problem-solving	2	6.7	4	13.3	9	30	12	40	3	10
16	Not easily discouraged by failure	4	13.3	5	16.7	5	16.7	11	36.7	5	16.6
17	Think of yourself as a strong person	3	10	8	26.7	6	20	9	30	4	13.3
18	Make unpopular or difficult decisions	2	6.7	4	13.3	9	30	12	40	3	10
19	Can handle unpleasant feelings	4	13.3	9	30	11	36.7	6	20	0	0
20	I have to act on a hunch	2	6.7	7	23.3	8	26.7	5	16.7	8	26.7
21	Strong sense of purpose	2	6.7	4	13.3	9	30	12	40	3	10
22	In control of your life	4	13.3	9	30	11	36.7	6	20	0	0
23	I like challenges	0	0	4	13.3	7	23.3	11	36.7	8	26.7
24	You work to attain your goals	0	0	6	20	5	16.7	10	33.3	9	30
25	Pride in your achievements	0	0	8	26.7	7	23.3	7	23.3	8	26.7

Table 2. Rating scale on the Connor-Davidson Resilience scale (CD-RISC) to assess the resilience of mothers having children with disabilities and behaviour problems.

The highest percentage of respondents (73%) live in urban, and the lowest percentage (27%) live in Rural. The highest percentage of respondents (57%) have their occupation status as housewives, and the lowest percentage (43%) are working. The highest percentage of respondents (43%) have only 1-2 children, and the lowest percentage (24%) have more than 5 children. The highest percentage of respondents (30%) their children were both 3-5 years and 5-8 years old respectively, and the lowest percentage (13%) were more than 8 years old. The highest percentage of respondents (70%) their family type was Nuclear Families. A nuclear family has two adults with at least one child, and the lowest percentage (4%) were Grandparent Families. The highest percentage of respondents (70%) their family monthly income is 5,000-20,000 SR, and the lowest percentage (10%) is Greater than 20,000 SR. The highest percentage of respondents (53%) their family members of 3-5 members, and the lowest percentage (20%) have 6 or more members. The highest percentage of respondents (90%) their children with Disabilities and Behavior Problems, and the lowest percentage (10%) are without Disabilities and Behavior Problems. The highest percentage of respondents (27%) their children with Disabilities and behavioral problems are Intellectual and physical, and the lowest percentage (3%) is Visual. The highest percentage of respondents (63%) their children's gender is boys, and the lowest percentage (37%) are girls. All the respondents (100%) have their children's place of residence in the family itself. No children were living in rehabilitation centers. The highest percentage of respondents (70%) whose Sources of medical expenses are Self-paying, and the lowest percentage (30%) is Medicare.

Table 1 - Likert scale on the short form of the Developmental Behavior Checklist (DBC-24), to measure behavior problems in children with disabilities between 4–18 years of age shows that in many aspects of developmental behavior, the child has very true or often true in all the items. Only one item the maximum percentage (90%) of the children has responded not true as far as I know in the item of inappropriate sexual activity with another. Very less percentage around 10 to 20 percent of children responded non-true as far as I know in a few items of DBC-24.

Table 2 - Rating scale on the Connor-Davidson Resilience scale (CD-RISC) to assess the resilience of mothers having children with disabilities and behaviour problems shows that a maximum of around 60 percent of mothers responded true nearly all the time for all the aspects of resilience items. Around 40 percent of mothers had low resilience scores in all aspects rating scale.

The distribution of the Mean and standard deviation of the Developmental Behaviour Checklist and Connor-Davidson Resilience scale (CD-RISC) to assess the resilience of mothers having children with disabilities and behaviour problems show that the overall mean score for the Developmental Behaviour Checklist was 37.57±3.401 it reveals that children had a severe level of development behaviour disability and the overall mean score for Connor-Davidson Resilience scale predicts that the

S.No	Description	Max Score	Mean	SD	Correlation & Co-efficient
1	Developmental Behavior Checklist	48 Mild – 1-16 Moderate – 17-32 Severe – 33-48	37.57	3.401	0.243
2	Connor-Davidson Resilience Scale (CD-RISC)	100 Low resilience – 1-33 Moderate resilience – 34-66 High resilience – 67-100	42.43	6.611	

Table 3. Distribution of Mean and standard deviation of Developmental Behaviour Checklist and Connor-Davidson Resilience scale (CD-RISC) to assess the resilience of mothers having children with disabilities and behaviour problems.

mothers were having moderate level of resilience score of children with disabilities and behaviour problems (Table 3).

There was no significant association was found between the demographic variables and the Resilience score and developmental behaviour score of children with disabilities, except in the level of education significant association was found. There was a positive correlation was found between the Resilience and developmental behaviour score at p>0.05 level.

DISCUSSION This study focused on mothers' resilience when raising children with behavioral issues and impairments. Anxiety and disappointment can arise in a family when parents' expectations and wishes for a healthy child are not fulfilled. Having a child with a disability causes one to experience feelings of exclusion, frustration, guilt, and fault. At last, these emotions may manifest as despair or sadness. Iranian academics have undertaken numerous studies on the quality of life of mothers and fathers raising impaired children, but very few have focused on their resilience [55–57]. Test-retest reliability and internal consistency are strong points of the CD-RISC, validated in clinical and general populations. The scale shows validity compared to other stress and hardiness measures. It represents varying degrees of resilience in groups believed to differ, among other things, based on their level of resilience (e.g., general population vs. patients with anxiety disorders).

Mothers of disabled children have significantly lower mean scores, according to the results. Mothers of children with acute lymphoblastic leukemia have significantly lower mean scores than mothers of children with normal conditions, according to research by Baran et al.58. According to Keniş-Coşkun et al. (2020), people become less resilient when faced with challenging life circumstances, such as having a kid with a disability [59]. The resilience of mothers with children who are impaired and mothers with children who are usually developing is similar, according to the findings of this study on resilience. However, as demonstrated by Kenis-Coskun's study, having a child with a handicap or other traumatic life events lowers resilience.60Moms of children with disabilities face diminished resilience and adverse effects on their overall health and quality of life [56].

Based on the explanation of these results, resilience is a personality attribute that can significantly impact an individual's behavior, level of satisfaction, and quality of life. Mothers of disabled children perform poorly and frustratingly; they learn slowly and grow slowly. Additionally, their children's trials and futile efforts may lessen their tolerance; if resilience declines, they may become unable to handle life's challenges and exhibit fragility on even the smallest issues. Consequently, their quality of life declines due to this decline in resilience. However, mothers with strong resilience and personality traits are tolerant rather than accepting failure. Despite encountering numerous challenges, they strive to identify the ideal answer. However, they never give up on attempting to get the intended outcome and are happy with their accomplishment, resulting in a great quality of life.

The current study's findings showed that mothers' quality of life is influenced by their educational attainment; consequently, moms with less education have lower quality of life. The findings of this investigation are consistent with those of Klassen et al.'s studies, Misura et al., and Zareinejad et al. [62-63]. The findings of the studies by Gheysaranpour et al. on parents of thalassemia patients indicated that parents with greater levels of education had a better quality of life [64].

Based on an analysis of the study's findings, we may conclude that a mother's education [Bachelor’s degree (63%) & Master's degree (4%)] has several positive effects on her child's health, including increased family income, decision-making ability, better use of already available services, and better child care [65]. Furthermore, higher education is typically associated with better socioeconomic status (SES), according to Misura et al., suggesting that the influence of SES may act as a mediating factor between educational attainment and SES [63]. Greater QOL can result from lower mental and physical stress exposure caused by increased income.

CONCLUSION Rehabilitation specialists must examine and train women in resilience. Women who have children with disabilities can be empowered by strengthening their resilience through social support, family support, training, hope, etc. Mothers who possess resilience are better able

to handle and manage stressful circumstances. A range of programs could be considered to enhance the social-ecological surroundings for women raising children with disabilities. Resilience is more influenced by the accessibility and availability of culturally meaningful resources than by the intrinsic traits of the individual. Researchers need more information about the interactions between the mother, brother, kids, and family members with impairments. They could achieve this with the aid of longitudinal research.

Conflicts of interest: The authors declare no conflicts of interest.

REFERENCES

1. World Health Organization. International Classification of Functioning, Disability and Health: Child Youth Version, ICF-CY. Geneva: World Health Organization; 2007.
2. Kalhori RP, Ziapour A, Kianipour N, Foroughinia A. A study of the relationship between lifestyle and happiness of students at Kermanshah University of Medical Sciences over 2015–2016. Ann Trop Med Public Health. 2017;10(4):1004. doi:10.4103/ATMPH.ATMPH_310_17
3. Yarar F, Akdam M, Çarpan İ, Topal S, Şenol H, Tekin F. Impact of having a disabled child on mothers' anxiety, depression, and quality of life levels. Pamukkale Tıp Dergisi. 2021;14(1):223–32. doi.org/10.31362/patd.758161
4. Fairthorne J, Jacoby P, Bourke J, de Klerk N, Leonard H. Onset of maternal psychiatric disorders after the birth of a child with autism spectrum disorder: a retrospective cohort study. Autism. 2016;20(1):37–44. doi: 10.1177/1362361314566048
5. Mohammadi M, Ziapoor A, Mahboubi M, Faroukhi A, Amani N, Hydarpour F, et al. Performance evaluation of hospitals under the supervision of Kermanshah medical sciences using Pabon Lasoty diagram of five years (2008–2012). Life Sci J. 2014;11(1):77–81.
6. Barghi Irani Z, Bagiyan Kulemarez MJ, Hazari N. The effectiveness of resilience training program on improving nurses' quality of life. Qual J Nurs Manag. 2017;5(5):9–18. doi: 10.29252/ijnv.5.3.4.9
7. Pocinho M, Fernandes L. Depression, stress, and anxiety among parents of sons with disabilities. PPRJ. 2018; 1:94–103.
8. Leung CYS, Li-Tsang CW. Quality of life of parents who have children with disabilities. Hong Kong J Occup Ther. 2003; 13:19–24. doi.org/10.1016/S1569-1861(09)70019-1
9. WHO Quality of Life Group. Measuring quality of life: the development of the World Health Organization Quality of Life instrument (WHOQoL). Geneva: World Health Organization; 2007.
10. Estrella-Castillo DF, Gomez-de-Regil L. Quality of life in Mexican patients with primary neurological or musculoskeletal disabilities. Disabil Health J. 2016;9(1):127–33. doi: 10.1016/j.dhjo.2015.05.003
11. Dadashzadeh H, Arfaei A, Mousavikia S, Alizadeh A. Evaluation and comparing of quality of life in patients with major depression and bipolar mood disorder in the partial recovery phase with normal individuals. J Urmia Univ Med Sci. 2013;24(5):364–72.
12. Lebni JY, Toghroli R, Abbas J, Kianipour N, NeJhaddadgar N, Salahshoor MR, et al. Nurses' work-related quality of life and its influencing demographic factors at a public hospital in western Iran: a cross-sectional study. Int Q Community Health Educ. 2020;40(1):1–10. doi: 10.1177/0272684X20972838
13. Buckner JC, Mezzacappa E, Beardslee WR. Characteristics of resilient youths living in poverty: the role of self-regulatory processes. Dev Psychopathol. 2013;15(1):139–62. doi: 10.1017/s0954579403000087
14. Kenis¸-Cos¸kun O, Atabay CE, S¸ ekeroglu A, et al. The relationship between caregiver burden and resilience and quality of life in a Turkish pediatric rehabilitation facility. J Pediatr Nurs. 2020; 52–13. doi.org/10.1016/j.pedn.2019.10.014
15. Çulhacik GD, Durat Gg, Eren N. Effects of activity groups, in which art activities are used, on resilience and related factors in families with disabled children. Perspect Psychiatr Care. 2020;57(1):1–8. doi: 10.1111/ppc.12569
16. Hosseini Qomi T, Salimi Bijestani H. The effectiveness of resuscitation training on the stress of mothers with cancer children at Imam Khomeini hospital (Tehran, Iran). Health Psychol. 2013;1(4):97–109. doi: 10.12740/APP/122488
17. Samani S, Jokar B, Sahragard N. Effects of resilience on mental health and life satisfaction. Iran J Psychiatry Clin Psychol. 2007;13(3):290–5.
18. Sanders J, Munford R, Thimasarn-Anwar T, Liebenberg L, Ungar M. The role of positive youth development practices in building resilience and enhancing wellbeing

for at-risk youth. Child Abuse Neglect. 2015; 42:40–53. doi: 10.1016/j.chiabu.2015.02.006

19. Ghassemloo F, Yaghmaei F. Comparing resilience and quality of life of mothers with delinquent children and mothers with healthy children. Iran J Psychiatr Nurs. 2017;5(2):32–8. doi:10.21859/IJPN-05025
20. Nazari B, Bakhshi S, Kaboudi M, Dehghan F, Ziapour A, Montazeri A. A comparison of quality of life, anxiety, and depression in children with cancer and healthy children, Kermanshah-Iran. Int J Pediatr. 2017;5(7):5305–14. doi: 10.22038/ijp.2017.23540.1978
21. Moradi F, Tourani S, Ziapour A, Abbas J, Hematti M, Moghadam EJ*, et al.* Emotional intelligence and quality of life in elderly diabetic patients. Int Q Community Health Educ. 2020;40(1):1–6. doi: 10.1177/0272684X20965811
22. Ungar M, Liebenberg L, Dudding P, Armstrong M, Van de Vijver FJ. Patterns of service use, individual and contextual risk factors, and resilience among adolescents using multiple psychosocial services. Child Abuse Neglect. 2013;37(2-3):150–9. doi.org/10.1016/j.chiabu.2012.05.007
23. Jalili N, Godarzi M, Rassafiani M, Haghgou H, Dalvand H, Farzi M. The influenced factors on quality of life of mothers of children with severe cerebral palsy: a survey study. J Rehabil Res. 2013;7(3):40–7.
24. Benson PR. The impact of child symptom severity on depressed mood among parents of children with ASD: The mediating role of stress proliferation. J Autism Dev Disord. 2006;36(5):685–95. doi: 10.1007/s10803-006-0112-3
25. Bishop SL, Richler J, Cain AC, Lord C. Predictors of perceived negative impact in mothers of children with autism spectrum disorder. Am J Ment Retard. 2007;112(6):450–61. doi: 10.1352/0895-8017(2007)112[450:POPNII]2.0.CO;2
26. Crnic K, Low C. Everyday stresses and parenting. In: Bornstein MH, editor. Handbook of parenting. Vol 5. Mahwah, NJ: Lawrence Erlbaum Associates Publishers; 2002. p. 243–67.
27. Davis K, Gavidia-Payne S. The impact of child, family, and professional support characteristics on the quality of life in families of young children with disabilities. J Intellect Dev Disabil. 2009;34(2):153–62. doi: 10.1080/13668250902874608
28. Dunn ME, Burbine T, Bowers CA, Tantleff-Dunn S. Moderators of stress in parents of children with autism. Community Ment Health J. 2001;37(1):39–52. doi: 10.1023/a:1026592305436
29. Green SE. We're tired, not sad: Benefits and burdens of mothering a child with a disability. Soc Sci Med. 2007;64(1):150–63. doi: 10.1016/j.socscimed.2006.08.025
30. Horton TV, Wallander JL. Hope and social support as resilience factors against psychological distress of mothers who care for children with chronic physical conditions. Rehabil Psychol. 2001;46(4):382–99. doi.org/10.1037/0090-5550.46.4.382
31. Pakenham KI, Samios C, Sofronoff K. Adjustment in mothers of children with Asperger syndrome: An application of the double ABCX model of family adjustment. Autism. 2005;9(2):191–212. doi: 10.1177/1362361305049033
32. Pousada M, Guillamón N, Hernández-Encuentra E, *et al.* Impact of caring for a child with cerebral palsy on the quality of life of parents: A systematic review of the literature. J Dev Phys Disabil. 2013;25(1):1-33. doi.org/10.1007/s10882-013-9332-6
33. Resch JA, Mireles G, Benz MR, et al. Giving parents a voice: A qualitative study of the challenges experienced by parents of children with disabilities. Rehabil Psychol. 2010;55(2):139-150. doi: 10.1037/a0019473
34. Tobing LE, Glenwick DS. Predictors and moderators of psychological distress in mothers of children with pervasive development disorders. J Fam Soc Work. 2006;10(4):1-22. doi:10.1300/J039v10n04_01
35. Twoy R, Connolly PM, Novak JM. Coping strategies used by parents of children with autism. J Am Acad Nurse Pract. 2007;19(5):251-260. doi: 10.1111/j.1745-7599.2007.00222.x
36. Weiss MJ. Hardiness and social support as predictors of stress in mothers of typical children, children with autism, and children with mental retardation. Autism. 2002;6(1):115-130. doi.org/10.1177/1362361302006001009
37. Smith LE, Greenberg JS, Seltzer MM. Social support and well-being at mid-life among mothers of adolescents and adults with autism spectrum disorders. J Autism Dev Disord. 2012;42(9):1818-1826. doi: 10.1007/s10803-011-1420-9
38. Eisenhower A, Blacher J. Mothers of young adults with intellectual disability: Multiple roles, ethnicity, and well-being. J Intellect Disabil Res. 2006;50(12):905-916. doi: 10.1111/j.1365-2788.2006.00913.x

39. Emerson E, Hatton C, Llewellyn G, et al. Socio-economic position, household composition, health status, and indicators of the well-being of mothers of children with and without intellectual disabilities. J Intellect Disabil Res. 2006;50(12):862-873. doi: 10.1111/j.1365-2788.2006.00900.x
40. Emerson E, Llewellyn G. The mental health of Australian mothers and fathers of young children at risk of disability. Aust N Z J Public Health. 2008;32(1):53-59. doi: 10.1111/j.1753-6405.2008.00166.x
41. Emerson E, McCulloch A, Graham H, et al. Socioeconomic circumstances and risk of psychiatric disorders among parents of children with early cognitive delay. Am J Intellect Dev Disabil. 2010;115(1):30-42. doi: 10.1352/1944-7558-115.1.30
42. Hatton C, Emerson E. Does socioeconomic position moderate the impact of child behavior problems on maternal health in South Asian families with a child with intellectual disabilities? J Intellect Disabil. 2009;34(1):10-16. doi.org/10.1080/13668250802676012
43. Knestricht T, Kuchey D. Welcome to Holland: Characteristics of resilient families raising children with severe disabilities. J Fam Stud. 2009;15(3):227-244. doi:10.5172/jfs.15.3.227
44. Olsson MB, Hwang CP. Socioeconomic and psychological variables as risk and protective factors for parental well-being in families of children with intellectual disabilities. J Intellect Disabil Res. 2008;52(12):1102-1113. doi: 10.1111/j.1365-2788.2008.01081.x
45. Park J, Turnbull AP, Turnbull HR. Impacts of poverty on quality of life in families of children with disabilities. Excep Child. 2002;68(2):151-170. doi:10.1177/001440290206800201
46. Hjemdal O, Friborg O, Stiles TC, Martinussen M, Rosenvinge JH. A new scale for adolescent resilience: Grasping the central protective resources behind healthy development. Meas Eval Couns Dev. 2006;39(2):84-96. doi:10.1080/07481756.2006.11909791
47. Horn SR, Feder A. Understanding resilience and preventing and treating PTSD. Harv Rev Psychiatry. 2018;26(3):158-174. De Terte I, Stephens C. Psychological resilience of workers in high-risk occupations. Stress Health. 2014;30(5):353-355. doi: 10.1097/HRP.0000000000000194
48. De Terte I, Stephens C. Psychological resilience of workers in high-risk occupations. Stress Health. 2014;30(5):353-355. doi: 10.1002/smi.2627
49. Glinac A, Matovic L, Delalic A, et al. Quality of life in mothers of children with cerebral palsy. Acta Clin Croat. 2017;56(2):299-307. doi: 10.20471/acc.2017.56.02.14
50. Gogoi RR, Kumar R, Deuri SP. Anxiety, depression, and quality of life in mothers of children with intellectual disability. J Psychiatr Allied Sci. 2017;8(1):71-75. doi:10.5958/2394-2061.2016.00046.X
51. Peer JW, Hillman SB. Stress and resilience for parents of children with intellectual and developmental disabilities: A review of key factors and recommendations for practitioners. J Policy Pract Intellect Disabil. 2014;11(2):92-98. doi.org/10.1111/jppi.12072
52. Mohan R, Kulkarni M. Resilience in parents of children with intellectual disabilities. Psychol Dev Soc. 2018;30(1):19-43. doi:10.1177/0971333617747321
53. Farshad MR, Amirfakhraei A, Askari M, et al. Prediction of quality of life based on spiritual intelligence and resiliency in mothers of children with behavioral problems. Health Spiritual Med Ethics. 2020;7(3):56-64. doi: 10.52547/jhsme.7.3.56
54. Widyawa Y, Otten R, Kleemans T, Scholte RHJ. Parental resilience and the quality of life of children with developmental disabilities in Indonesia. Int J Disabil Dev Educ. 2020;1-14. doi.org/10.1080/1034912X.2020.1834078
55. Faramarzi S. Comparing the quality of life and psychological well-being in mothers of children with hearing loss and mothers of children with other special needs. Aud Vest Res. 2017;26(2):86-92. doi: 10.1016/j.heliyon.2021.e07285
56. Zandi H, Gholamali Lavasani M, Gholamali A, Mardookhi MS. Comparative study of mental health between fathers of exceptional children suffering from intellectual disability, multiple disabilities, physical-motor disorder, visual impairment and hearing impairment and fathers of normal children. MEJDS. 2017;7(1):104. doi: 20.1001.1.23222840.1396.7.0.87.5
57. Kiani B, Nami M. A comparative analysis on quality of life in mothers of autistic, blind, and normal-functioning children. J Adv Med Sci Appl Technol. 2016;2(2):1-9. doi: 10.18869/nrip.jamsat.2.2.213
58. Baran G, Arda Sürücü H, Üzel VH. Resilience, life satisfaction, care burden and social support of mothers with a child with acute lymphoblastic leukemia: A

comparative study. Scand J Caring Sci. 2020;34(2):340-347. doi: 10.1111/scs.12734
59. Keniş-Coşkun Ö, Atabay CE, Şekeroğlu A, et al. The relationship between caregiver burden and resilience and quality of life in a Turkish pediatric rehabilitation facility. J Pediatr Nurs. 2020;52. doi: 10.1016/j.pedn.2019.10.014
60. Klassen AF, Klaassen R, Dix D, et al. Impact of caring for a child with cancer on parents' health-related quality of life. J Clin Oncol. 2008;26(36):5884-5889. doi: 10.1200/JCO.2007.15.2835
61. Zareinejad S, Norouzi K, Saajedi F, Rahgooy A, Norouzi M, Hemmati A. Evaluation of the relationship between self-efficacy and quality of life in mothers with preterm infants in Kamali Hospital of Karaj, Iran, 2015. Iran J Rehabil Res Nurs. 2018;4(3):54-61. URL: ijrn.ir/article-1-246-en.html
62. Misura AK. Quality of life of parents of children with intellectual disabilities in Croatia. J Educ Soc Res. 2017;7(2):43-48. doi: 10.36941/jesr
63. Gheysaranpour H, d Hojjati H, Bakhshani N. Relationship between resilience and quality of life in parents with thalassemia major children in Zahedan city, Iran. J Rehabil Res Nurs. 2018;5(1):37-43. doi: 10.3371/CSRP.BNMG.080322
64. Blas E, Saivasankara Kurup A, editors. Equity, social determinants and public health programs. World Health Organization; 2010.
65. Vameghi M, Sajadi H, Rafiee H, Qaedamini Gh. The role of parental education and intermediary determinants on children's health in Iran. Razi J Med Sci. 2016;23(147):19-34. doi.org/10.1016/j.heliyon.2021.e07285