

PSYCHOLOGICAL BURDEN, HOPE, AND RESILIENCE AMONG MOTHERS OF AUTISTIC SPECTRUM CHILDREN; COMPARATIVE STUDY

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ABSTRACT

BACKGROUND AND OBJECTIVES: Autism spectrum disorder (ASD) is a lifelong neurodevelopmental disability includes deficits in social, communication skills and repetitive behaviors. The aim of the study was to compare the levels of psychological burden, hope, and resilience of mothers who have autistic child in comparison to mothers who have normal child.

SUBJECTS AND METHODS: A comparative cross-sectional study was conducted using a non-random sampling of 195 mothers of autistic child selected from governmental and private autism centers and a comparative group of mothers of normal children from Duhok province Iraq in a period of three months from 15th November 2021 to 15th February 2022. A battery of instruments was used to assess psychological burden, hope and resilience.

RESULTS: The study revealed that the stress, anxiety, and depression level mean scores were higher in mothers who have autistic child, Stress; (M=23.31, SD=5.442), Anxiety; (M=11.78, SD=4.045), and Depression; (M=13.24, SD=4.744) compared to scores in non-autistic mothers (M=7.48, SD=4.576), (M=4.16, SD=2.643), and (M=4.91, SD=2.852) respectively. Furthermore, the hope and resilience mean scores were lower in mothers who have autistic child hope; (M=35.18, SD=7.716) and resilience; (M=2.82, SD=0.608) respectively, compared to scores in non-autistic mothers (M=47.69, SD=5.371) and (M=3.86, SD=0.481) respectively. The study found that staying in the center and being a divorced mother were the mostly demographic factor having highly significant relationship with psychological burden, hope, and resilience.

CONCLUSIONS: The mothers of autistic children were significantly experiencing higher level of psychological burden and a lower level of hope and resilience as compared to mothers who have normal children. These findings are important for mental health planning for mothers of autistic children.

KEYWORDS: Autistic child, Psychological burden, Mother, Children, Hope, Resilience.

INTRODUCTION

Autism spectrum disorder (ASD) is a complex neurodevelopmental disorder characterized by persistent impairments in communication and social interaction, as well as the emergence of stereotypical behavioral patterns, hobbies, and interests (Hodges *et al.*, 2020). According to the American Centers for Disease Control and Prevention symptoms appear at a young age and can lead to serious issues in social, scholastic, and other areas of life (Christensen *et al.*, 2019).

Parenting a child with ASD can be stressful (Shattnawi *et al.*, 2021), due to severe cognitive limits and behavior management difficulties

causing a sense of imbalance in the household (Khawar *et al.*, 2016). There is substantial empirical indicating that mothers bear the main responsibility for raising a child with ASD and that the difficulties caring for a child with ASD can take a toll on their mental health (Lin, 2015; Lovell *et al.*, 2015). Mothers of children with ASD are typically burdened and worried, with little social support. The phrase "burden" refers to a mother's own suffering as a result of a family member's illness (Picardi *et al.*, 2018). Financial concerns, changes in social relationships, poor physical condition, a lack of social support, changes in daily routine, and a poor capacity to cope with stress all contribute to the mother's burden (Pavao *et al.*, 2014).

Davis and Carter studied the stress levels of mothers of children with ASD and found a high level of "mothering stress" (Davis *et al.*, 2008). Mothers of children with ASD experience and report higher levels of stress, despair, and anxiety, their psychological well-being is lower, and their risk of developing psychiatric problems is higher (Tzur Bitan *et al.*, 2018). Rather than underlying mental illness, the stress of caring for an ASD child, according to Fairthorne, has a direct impact on the development of psychiatric diseases in mothers of ASD children (Fairthorne *et al.*, 2018).

Hope is an important feature for mothers with challenging children in the midst of psychological distress (Ogston *et al.*, 2011). Optimistic thinking has been associated with lower levels of loneliness and depressive symptoms among mothers of children with ASD (Ekas *et al.*, 2016). Furthermore, mothers with higher resilience levels reported a higher sense of well-being (Halstead *et al.*, 2018). Higher levels of resilience can help protect against the onset of mental health problems (Bitsika *et al.*, 2013). hope and resilience are linked to the overall physical and psychological health of mothers of children with special needs (Ruiz-Robledillo *et al.*, 2014).

Autism spectrum is among the most common disorder and research on the psychological burden and stress among mothers of children with ASD has progressed significantly. There is an ample evidence that these mothers are under a great deal of stress (Hayes *et al.*, 2013). The current study aimed to find out the prevalence of psychological burden, hope, and resilience among mothers of autistic spectrum children in comparison with a group of mothers of normally developing children in Duhok Province-Iraq.

SUBJECTS AND METHODS

Study design and participants

This is a comparative, cross-sectional study performed within a period of three months from 15th of November 2021 to 15th of February 2022 on two groups of mothers: mothers of children diagnosed with autism spectrum disorder and those with normal developing children.

The participants were mothers who attended the autism centers in Duhok province in the North of Iraq. They were registered formally in these centers. For making the sample more convenient, the study was conducted in both private and governmental autistic centers (Etet autism center, Naz Duhok center for autism, Autism Training Teaching center, Zakho autism center, Zhin center autism, Kani center for autism, Rozh

autism center). Another group of mothers were recruited as a comparable group in (1=1 ratio) from public and private schools, and kindergartens.

Inclusion Criteria were children of 3 years' age and older, with or without autistic disorder, with their moms who aged 18 years or older. The diagnoses of autistic children were validated by a senior child psychiatrist according to the Diagnostic and Statistical Manual of Mental Disorders. The study excluded children with severe physical diseases such as congenital heart disease, or hematological system diseases, and mothers having serious mental illnesses that effect insight or participation in the study.

Scales of the study

The investigators applied a battery of psychological tools with a designed questionnaire consisted of four main parts: mothers' socio-demographic characteristics, Autistic and non-autistic child socio-demographic characteristics, psychological burden assessment by 10-items Perceived Stress Scale, 7-item Generalized Anxiety Disorder (GAD-7) scale, and Patient Health Questionnaire (PHQ-9) Scale, and assessment of mothers hope and resilience by Adult Hope Scale (AHS) and the Brief Resilience Scale (BRS). The questionnaire was forward and backwards translated to the Kurdish language by linguistic specialists.

Mother's socio-demographic characteristics: the participant was asked about age, residence, level of education, working status, and current marital status.

Children's socio-demographic characteristics consist of: age, gender, place of center, duration in center, level of education.

Perceived Stress Scale is used to measure the level of stress among mothers (Cohen *et al.*, 1983). The PSS is a 10-question tool used to measure an individual's perception of stress in the past month based on a 5-point Likert scale (never/ almost never/sometimes/ fairly often/ very often). We obtain the total perceived stress scale score by summation of the scores of each question. The total score ranges of 0-13, 14-26, and 27-40 indicate mild, moderate, and sever stress respectively.

Generalized Anxiety Disorder scale is applied in this study to assess the level of anxiety among mothers (Spitzer *et al.*, 2006). The participant was asked to respond to seven questions about the level of anxiety over the past two weeks based on a 4-point Likert scale (not at all/several days/over half a day/nearly every day). The total sum score

of GAD-7 can range from 0 to 21. Total scores of these ranges 0-4, 5-9,10-14,15-21 indicate none, mild, moderate, and severe anxiety respectively.

Patient Health Questionnaire evaluates the level of depression among mothers (Kroenke *et al.*, 2002). It is a 9-item scale, and the mother was required to select one of the 4 choices for each question (not at all/ several days / more than half the days /nearly every day). Its total score may range from 0 to 27. The cut off points of 5,10,15, and 20 represent the mild, moderate, moderately severe, and severe depression respectively.

The level of hope was measured based on adult hope scale (Gwinn *et al.*, 2018; Snyder *et al.*, 1991). The Hope Scale is a 12-question based on 8-point Likert scale from (definitely false=1 to definitely true=8) and consists of four agencies, four pathways, and four distracter items. Add items 1, 4, 6, and 8 to get the score for the Pathways subscale. This subscale has a range of 4 to 32 points, with higher values reflecting more pathways thinking. Subscale score for the agency: Add items 2, 9, 10, and 12. This subscale has a range of 4 to 32 points, with higher scores reflecting more agency thinking. The mother's total scores of <40,40-48,48-56,56-64 indicate low hope, hopeful, moderately hopeful, and high hope respectively.

The Brief Resilience Scale (Smith *et al.*, 2008) was applied in this study to evaluate the mother ability to recover or bounce back from stress. The total score was obtained using a 5-point Likert scale ranging from strongly disagree/ disagree/ neutral/ agree/ strongly agree. For all six questions, the replies ranged from 1 to 5, resulting in a range of 6 to 30. The total scores of 1.00-2.99,3.00-4.30,4.31-5 indicate low, normal or high resilience level respectively. Subtract the total amount by the number of questions answered.

Ethical consideration

The Ethical approval was obtained from the Ethical Committee of University of Duhok, at College of Nursing, to conduct the study. Then an official permission letter was directed from the College of Nursing to University of Duhok next to the Director of Health in Duhok governorate as reference number (24102021-10-40). Informed consent was taken from the (general Director of Education of Duhok governorate, and autism center of Duhok governorate). Oral informed consent was obtained from mothers in Duhok

province in order to participate in the present study.

Validity and ratability of the questionnaire

The questionnaire's validity was accepted and confirmed with the help of a panel of seven experts from several related fields, their responses revealed several comments on the questionnaire page, which were modified in response to their suggestions. The reliability of the questionnaire sheet was applied based on the test-retest method, the survey instrument had a reliability and consistency of alpha Cronbach score of 0.89, indicating that it was reliable and consistent.

Data analysis

The data were analyzed through the use of statistical package for social science version 23 (SPSS); the purpose of this analysis was to find answers to the research questions. Descriptive statistics were used, to answer all of the questions such as frequency, percentage, mean, and standard deviation. and Inferential was utilized Pearson correlation through the application of an independent t-test to answer the questions related to the relationship between mothers' demographic variables in regard to psychological burden, hope, and resilience. The significance of result was obtained based on the P-value (**. highly significant at the 0.01 level (2-tailed) and (*. P value is significant at the 0.05 level (2-tailed))(Steel *et al.*, 2021).

RESULTS OF THE STUDY

According to data analysis of the present study Table (1) shows the socio-demographic data of mothers who have autistic child and non-autistic child. The highest percent of the autistic and non-autistic mothers in the age group was 30-39 years 97 (49.7%) of autistic which was less than that of non- autistic mothers 104 (53.3%). The majority of mothers were lives in Duhok city 129 (66.2%). Regarding education level, most of the autistic mothers 42 (21.5%) and 45 (23.1%) of non-autistic mothers were illiterate. The majority of mothers 135 69.2%) of autistic and 110 (56.4%) of non-autistic were unemployed, and the majority 193 (99%) of the autistic mothers and 189 (96.9%) of non-autistic mothers were married, compared to 2 (1%) of autistic mothers and 5(2.6%) of non-autistic mothers were divorced.

Table (1): Distribution of socio-demographic data of mothers with autistic and non-autistic children

| Variables | | Autistic Child | | Non-Autistic Child | |
|--------------------|------------------|----------------|------------------|--------------------|------------------|
| | | F. (%) | Mean (\pm SD) | F. (%) | Mean (\pm SD) |
| Age of Mothers | 20-29 | 39 (20) | 35.58 (7.427) | 48 (24.6) | 34.06 (5.941) |
| | 30-39 | 97 (49.7) | | 104 (53.3) | |
| | 40-50 | 59 (30.3) | | 43 (22.1) | |
| Geographical Area | Duhok | 129 (66.2) | | 129 (66.2) | |
| | Zakho | 46 (23.6) | | 46 (23.6) | |
| | Akre | 13 (6.7) | | 13 (6.7) | |
| | Amedi | 7 (3.6) | | 7 (3.6) | |
| Level of Education | Illiterate | 42 (21.5) | | 45 (23.1) | |
| | Primary school | 38 (19.5) | | 33 (16.9) | |
| | Secondary school | 32 (16.4) | | 13 (6.7) | |
| | High school | 20 (10.3) | | 21 (10.8) | |
| | Institute | 27 (13.8) | | 42 (21.5) | |
| | College and more | 36 (18.5) | | 41 (21) | |
| Working Status | Employed | 60 (30.8) | | 85 (43.6) | |
| | Unemployed | 135 (69.2) | | 110 (56.4) | |
| Marital Status | Married | 193 (99) | | 189 (96.9) | |
| | Divorced | 2 (1) | | 5 (2.6) | |
| | Widowed | 0 (0) | | 1 (0.5) | |

Table (2) shows the socio-demographic data of autistic and non-autistic children. The majority of children were between 5-10 years 127 (65.1%) of autistic and 139 (71.3%) of non-autistic. Most of the children were boys more than one third 157 (80.5%) of autistic and 111 (56.9%) of non-

autistic. The majority of non-autistic children were from primary school 134 (68.7%). So the highest percentage of autistic children were from Naz center 60 (30.8%), and 158 (81%) of autistic children have duration in the center in 1-12 months.

Table (2): Distribution of socio-demographic data of autistic and non-autistic children

| Variables | | Autistic Child | | Non-Autistic Child | |
|------------------------|----------------|----------------|------------------|--------------------|------------------|
| | | F. (%) | Mean (\pm SD) | F. (%) | Mean (\pm SD) |
| Age of Child | <5 Years | 45 (23.1) | 6.78 (2.716) | 33 (16.9) | 7.21 (2.524) |
| | 5-10 Years | 127 (65.1) | | 139 (71.3) | |
| | >10 Years | 23 (11.8) | | 23 (11.8) | |
| Gender of Child | Boy | 157 (80.5) | | 111 (56.9) | |
| | Girl | 38 (19.5) | | 84 (43.1) | |
| Child' Education Level | Kinder garden | | | 61 (31.3) | |
| | Primary school | | | 134 (68.7) | |

| | | | |
|-----------------------------------|--------------|-----------|-------------|
| Location of Center | Etet | 55 (28.2) | |
| | Naz | 60 (30.8) | |
| | ATT | 14 (7.2) | |
| | Zakho | 19 (9.7) | |
| | Zhin | 27 (13.8) | |
| | Kani | 13 (6.7) | |
| | Rozh | 7 (3.6) | |
| Duration of stay in Center | 1-12 Months | 158 (81) | 8.93 (9.96) |
| | 13-24 Months | 19 (9.7) | |
| | 25-36 Months | 14 (7.2) | |
| | 37-48 Months | 4 (2.1) | |

Table (3) shows that the mean stress score was higher among mothers of autistic children (23.31) as compared to mothers of non-autistic children (7.48). and the mean anxiety score was higher among mothers of autistic children (11.78) as compared to mothers of non-autistic children (4.16) as the same, the mean depression score was greatly higher among mothers of autistic children

(13.24) as compared to mothers of non-autistic children (4.91). the mean hope score level was lower among mothers of autistic children (35.18) as compared to mothers of non-autistic children (47.69). the mean resilience score level was lower among mothers of autistic children (2.82) as compared to mothers of non-autistic children (3.86).

Table (3): Distribution of ASD and non ASD Mothers by their Psychological Burden, Hope, and Resilience Factors

| Factors | ASD Child | | Non-ASD Child | | |
|-------------------|------------------------------|------------------|---------------|------------------|---------------|
| | F. (%) | Mean (\pm SD) | F. (%) | Mean (\pm SD) | |
| Stress | Low stress | 7 (3.6) | 23.31 | 174 (89.2) | 7.48 (4.576) |
| | Moderate stress | 142 (72.8) | (5.442) | 21 (10.8) | |
| | High stress | 46 (23.6) | | 0 (0) | |
| Anxiety | No anxiety | 8 (4.1) | 11.78 (4.045) | 123 (63.1) | 4.16 (2.643) |
| | Mild anxiety | 51 (26.2) | | 65 (33.3) | |
| | Moderate anxiety | 81 (41.5) | | 5 (2.6) | |
| | Severe anxiety | 55 (28.2) | | 2 (1) | |
| Depression | None depression | 5 (2.6) | 13.24 (4.744) | 95 (48.7) | 4.91 (2.852) |
| | Mild depression | 39 (20) | | 91 (46.7) | |
| | Moderate depression | 68 (34.9) | | 6 (3.1) | |
| | Moderately severe depression | 64 (32.8) | | 3 (1.5) | |
| | Severe depression | 19 (9.7) | | 0 (0) | |
| Hope | Low Hope | 142 (72.8) | 35.18 | 16 (8.2) | 47.69 (5.371) |
| | Hopeful | 38 (19.5) | (7.716) | 75 (38.5) | |
| | Moderately hopeful | 14 (7.2) | | 94 (48.2) | |
| | High hope | 1 (0.5) | | 10 (5.1) | |
| Resilience | Low resilience | 108 (55.4) | 2.82 | 11 (5.6) | 3.86 (0.481) |
| | Normal resilience | 87 (44.6) | (0.608) | 147 (75.4) | |
| | High resilience. | 0 (0) | | 37 (19) | |

Table (4) depicts a significant difference between mothers of autistic and non-autistic children perceived stress scores: with a mean difference of 15.831 while statistically significant difference with generalized anxiety scores with a mean difference of 7.621. Also had significant difference with patient health scores: with a mean

difference of 8.328. moreover, the table also shows significant difference between mothers of autistic and non-autistic children hope scores with a mean difference of -1.04267. however, had significant difference with resilience scores: with a mean difference of -12.508.

Table (4): Comparison of Psychological Burden, Hope, and Resilience Between Mothers’ of ASD and Non ASD Children

| | t-test for Equality of Means | | | | | | |
|-------------------|------------------------------|-----|-----------------|-----------------|-----------------------|---|---------|
| | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | Lower | Upper |
| Stress | 31.090 | 388 | .000 | 15.831 | 0.509 | 14.830 | 16.832 |
| Anxiety | 22.023 | 388 | .000 | 7.621 | 0.346 | 6.940 | 8.301 |
| Depression | 21.012 | 388 | .000 | 8.328 | 0.396 | 7.549 | 9.107 |
| Hope | -18.772 | 388 | .000 | -1.04267 | 0.05554 | -1.15187 | -.93346 |
| Resilience | -18.579 | 388 | .000 | -12.508 | 0.673 | -13.831 | -11.184 |

Table (5): The Relationship of Psychological Burden, Hope, and Resilience of ASD Mothers’ with Socio-Demographic Data

| | | Stress | Anxiety | Depression | Resilience | Hope |
|---------------------------|---------------------|----------------|----------------|----------------|---------------|---------------|
| Age of mothers | Pearson Correlation | .101 | .015 | .059 | .144* | .044 |
| | Sig. (2-tailed) | .159 | .837 | .410 | .045 | .543 |
| Geographical Area | Pearson Correlation | -.005 | .012 | -.037 | -.126 | -.169* |
| | Sig. (2-tailed) | .945 | .873 | .607 | .079 | .018 |
| Level of Education | Pearson Correlation | -.130 | -.093 | -.054 | -.003 | .142* |
| | Sig. (2-tailed) | .069 | .197 | .452 | .963 | .047 |
| Working Status | Pearson Correlation | .151* | .105 | -.001 | -.015 | -.117 |
| | Sig. (2-tailed) | .035 | .145 | .986 | .831 | .104 |
| Marital Status | Pearson Correlation | -.015 | .018 | .027 | -.053 | .084 |
| | Sig. (2-tailed) | .832 | .802 | .707 | .461 | .246 |
| Age of Child | Pearson Correlation | -.120 | -.177* | -.116 | .134 | .044 |
| | Sig. (2-tailed) | .094 | .013 | .106 | .062 | .537 |
| Gender of Child | Pearson Correlation | .184* | .190** | .079 | -.117 | -.057 |
| | Sig. (2-tailed) | .010 | .008 | .273 | .103 | .427 |
| Duration in Center | Pearson Correlation | -.326** | -.473** | -.477** | .315** | .318** |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .000 |

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

* . Correlation is significant at the 0.05 level (2-tailed).

Table (6): The Relationship of Psychological Burden, Hope, and Resilience of Non-ASD Mothers' with Socio-Demographic Data

| | | Stress | Anxiety | Depression | Resilience | Hope |
|-------------------------------|---------------------|----------------|----------------|----------------|----------------|----------------|
| Age of mothers | Pearson Correlation | .014 | .086 | .030 | .148* | .193** |
| | Sig. (2-tailed) | .843 | .232 | .673 | .039 | .007 |
| Geographical Area | Pearson Correlation | -.270** | -.197** | -.328** | .158* | .210** |
| | Sig. (2-tailed) | .000 | .006 | .000 | .027 | .003 |
| Level of Education | Pearson Correlation | .150* | -.125 | -.013 | -.027 | -.045 |
| | Sig. (2-tailed) | .036 | .081 | .856 | .710 | .533 |
| Working Status | Pearson Correlation | -.161* | .063 | -.020 | .076 | .042 |
| | Sig. (2-tailed) | .025 | .385 | .785 | .292 | .558 |
| Marital Status | Pearson Correlation | .433** | .412** | .354** | -.252** | -.207** |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .004 |
| Age of Child | Pearson Correlation | .076 | .167* | .139 | .134 | .096 |
| | Sig. (2-tailed) | .291 | .020 | .053 | .063 | .182 |
| Gender of Child | Pearson Correlation | -.044 | -.078 | -.104 | -.054 | -.022 |
| | Sig. (2-tailed) | .539 | .280 | .146 | .457 | .765 |
| Child' Education Level | Pearson Correlation | .064 | .046 | .045 | .090 | .067 |
| | Sig. (2-tailed) | .374 | .521 | .528 | .211 | .355 |

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

* . Correlation is significant at the 0.05 level (2-tailed)

DISCUSSIONS

The present study primarily investigated the level of psychological burden, hope, and resilience among mothers of ASD and compared it to mothers of non-autistic children in Duhok province.

Based on the findings of this research, 390 autistic and non-autistic mothers of different ages were enrolled in the study. Mothers of autistic children were more likely to experience negative psychological effects, the results of the current study show that there is a significant relationship of psychological burden hope, and resilience of mothers of autistic compared to non-autistic mothers.

The current study revealed that the mean stress score was higher among mothers of autistic children as compared to mothers of non-autistic children. The outcome is the same for Al Towairqi *et al.* (2015) They discovered that mothers of children with ASD are more stressed than mothers of children who are growing normally. Further study by Altourah *et al.* (2020) estimated stress score among mothers of autistic was greater than mothers of non-autistic.

Based on the findings of the current study, the mean anxiety score was greatly higher among mothers of autistic children as compared to mothers of non-autistic children, and the mean depression score was greatly higher among

mothers of autistic children as compared to mothers of non-autistic children. The study goes in line with Almansour *et al.* (2013) who mentioned that the mean depression and anxiety score of mothers of autistic children was considerably greater than that of mothers of non-autistic children.

Fido *et al.* (2013) & Al-Farsi *et al.* (2013) reported that the pressures imposed on mothers caring for a child with autism lead to a greater overall prevalence of mothers' depression and anxiety, which has a negative impact on family quality of life. Furthermore, most mothers with autistic children felt they had failed as wives in the latter study, and several were threatened with divorce or violence.

Moreover, when compared to mothers of normal children's mothers of autistic children had a lower level of hope and resilience. This finding is indicated with Ersoy *et al.* (2020) who showed there were mothers of autistic children reported lower levels of dispositional hope and psychological well-being than mothers of normal children. While, Sinha *et al.* (2016) found that the parenting style was the only element that had an impact on parental resilience. The resilience of authoritative parents is higher than that of authoritarian parents, it's possible that feelings of warmth toward the child have a greater impact on parental resilience than feelings of control.

Mothers with autistic children frequently have a severe range of challenges in raising their children and overall managing a regular family life. In the present study, there is a significant relationship between autistic mothers' age and their resilience. The majority of mothers were in the age group of 30 to 39 years old. This result disagrees with Sinha *et al.* (2016) who found no significant relationship between mothers' age and their resilience factor.

Additionally, there is a significant relationship between hope and level of education. Most mothers were illiterate. Conversely, the result of Ersoy *et al.* (2020) stated that educational level did not have any relationship with hope of the mothers with autistic children.

The working status of the mothers with autistic children had a significant relationship with perceived stress, so the majority of mothers were unemployed and spent more time with their children were shown to be more stressed. Similarly, Sinha *et al.* (2016) found that there is a significant relationship between perceived stress and working status.

There is also a significant relationship between the age of children and generalized anxiety. The majority of children were in the age group 5 to 10 years. The study by Almansour *et al.* (2013) found that the age of autistic children was not found to be a significant relationship in their anxiety at ($p=0.608$) score.

A recent study has shown that the gender of children had a significant relationship with perceived stress and generalized anxiety, most autistic children were male. The results were supported by Sinha *et al.* (2016) & Cetinbakis *et al.* (2020) who stated parents with a male child reported higher levels of stress and anxiety.

Furthermore, the result of the study found that there is a significant relationship between all factors and duration in center. The majority of children had duration in center for (1 to 12) months. Consequently, it was expected that their psychological burden was high, and low level of hope and resilience compared to those who had a long duration in the center. Up to our knowledge there was no similar study title done in Duhok, also we did not find related studies that supported the present study with psychological burden, hope, and resilience factors.

The relationship between socio-demographic data and non-autistic mothers shows that there is a significant relationship between mothers' age and their hope and resilience. The majority of mothers were in the age group of 30 to 39 years

old. This result disagrees with Sinha *et al.* (2016) & Ersoy *et al.* (2020) who found no significant relationship between mothers' age and their hope and resilience factor.

According to the findings of the current research, level of education and working status had a significant relationship with perceived stress. Most of mothers with non-autistic children were illiterate and unemployed. So, this finding contradicts the studies by Sinha *et al.* (2016) which illustrated that education level and working status had no significant relationship with perceived stress.

So the results of the current study found that there is a significant relationship between psychological burden, hope, resilience and marital status. Conversely, the result of Sipowicz *et al.* (2022) stated that marital status did not have any relationship with psychological burden.

Age of child of non-autistic children had a significant relationship with anxiety. Most of non-autistic children were between the age of 5-10 years because the majority of children were selected from primary school. However, Fido *et al.* (2013) found out that age of child had no significant relation with anxiety.

Furthermore, the study revealed that gender and education level of non-autistic children had no significant relationship with psychological burden, hope and resilience. This disagrees with (Sinha *et al.*, 2016) who stated that male child was a significant relationship with psychological burden and resilience.

There may be some limitations to this research, such as: The sample size: surely, the larger the sample, the more precise the results will be. The language barrier: nearly all of the mothers were Kurdish, but some preferred to use the Arabic version and some the English one, and translation to the Arabic language was expected to be more difficult for the majority. Some variables were not so clear for most mothers, like having chronic medical or mental disorders. The problem of accessing to some mothers. Due to a dearth of information regarding children's situations, mothers feel helpless when questioned about their children. Up to our knowledge there was no similar study title done in Duhok, also we did not find related studies that supported the present study for comparison and better discussion.

CONCLUSIONS

According to the results of the study the researcher concluded that mothers of autistic children faced a significant higher level of psychological burden as compared to mothers of normal children, and mothers of autistic children have a lower level of hope and resilience as compared to mothers of normal children. Socio-demographic factors of mothers of autistic children significantly affect the psychological burden, hope and resilience, duration in center for autistic children were the most significant impact on autistic mothers' psychological burden, hope and resilience.

RECOMMENDATIONS

Based on the study's findings, the researcher suggests that individual counseling sessions for mothers should be available at institutions that provide care for children with autism. There are no institutes supporting mothers that have children with autism and There is a lack of governmental autism center in Duhok province. encourage more governmental center to establish social and leisure time activities for children with ASD and their mothers to minimize psychological distress. Psychosocial facilities and special education especially for school aged children with ASD to alleviate the demand psychological burden, hope and resilience. There should be education programs to the community about autism and the family with an autistic child should not be blamed, to alleviate the feeling that mothers are seen as second-class citizens by the community. Many studies have found that social support plays an important role in reducing the psychological burden and elevating hope level and resilience in mothers of children with ASD.

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الخلاصة

الخلفية والأهداف: اضطراب طيف التوحد (ASD) عبارة عن إعاقة نمو عصبي مدى الحياة والتي تشمل أوجه القصور في المهارات الإجتماعية، مهارات الإتصال والسلوكيات المتكررة. لذلك هدفت هذه الدراسة على مقارنة مستوى العبء النفسي، الأمل والمرونة لدى أمهات الأطفال المصابين بطيف التوحد مع أمهات الأطفال الطبيعيين.

المواضيع والأساليب: تمت الموافقة على إجراء دراسة مقطعية مقارنة باستخدام عينة غير عشوائية من 195 أم من أسر الاطفال المصابين بالتوحد والتي تم اختيارهن من مراكز التوحد الحكومية والخاصة وتمت مقارنتهم مع مجموعة اخرى من أمهات الأطفال الطبيعيين من عدة مقاطعات في دهوك، كردستان العراق ولمدة ثلاثة أشهر من 15 تشرين الثاني 2021 إلى 15 شباط 2022. تم استخدام مجموعة من الأدوات لتقييم العبء النفسي، الأمل والمرونة.

النتائج: أفادت الدراسة أن متوسط درجات مستوى التوتر والقلق والاكتئاب كان أعلى عند أمهات الأطفال المصابين بالتوحد القلق؛(M=23.31, SD=5.442) والتوتر؛(M=11.78, SD=4.045) والاكتئاب؛(M=13.24, SD=4.744) مقارنة بدرجاتها عند أمهات الأطفال الطبيعيين (M=7.48, SD=4.576) و(M=4.16, SD=2.643) و(M=4.91, SD=2.852) على التوالي. إضافة لذلك أظهرت الدراسة بأن متوسط درجات الأمل والمرونة الإدراكية لدى أمهات الأطفال المصابين بالتوحد الأمل؛ (M=35.18, SD=7.716) والمرونة؛ (M=2.82, SD=0.608) أقل مما هي عليه مقارنة بأمهات الأطفال الطبيعيين (M=47.69, SD=5.371) و (M=3.86, SD=0.481) على التوالي. كما أظهرت الدراسة بأن فترة البقاء في المركز و كون الأم منفصلة (مطلقة) أعتبركعاملين أساسيين اللذان كانت لهما صلة ذات دلالة احصائية مهمة مع مستوى العبء النفسي، الأمل والمرونة.

الإستنتاج: إستنتجت الدراسة بأن أمهات الأطفال المصابين بالتوحد يعانون من الضغوطات النفسية بمستوى أعلى وشكل كبير، بينما مستوى الأمل والمرونة لديهم كان أقل مقارنة بأمهات الأطفال الطبيعيين. إتضح من خلال هذا الإستنتاج إن التخطيط لتقوية الصحة العقلية لأمهات الأطفال المصابين بالتوحد مهم جداً، وذلك لتقليل تلك الضغوطات النفسية ورفع مستوى الأمل والمرونة الإدراكية لديهم.

الكلمات المفتاحية: اضطراب طيف التوحد، العبء النفسي، الأم، الطفل، الأمل، المرونة.