THE EFFECTIVENESS OF COUNSELING PROGRAMS IN ENHANCING QUALITY OF LIFE FOR FAMILIES OF CHILDREN WITH AUTISM SPECTRUM DISORDER IN JORDAN

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ABSTRACT

This study examined the effectiveness of a developed counseling program in enhancing quality of life of families of children with autism spectrum disorder and its relationship with selected variables, and thirty parents of children with autism spectrum disorder were selected randomly. The Quality of Life Scale (QOLS) was developed by the researchers and used before and after applying the counseling program. The findings showed statistical differences in the post-measurement in favor of the experimental group, demonstrating the program's effectiveness. In addition, there were no statistical differences found in the level of quality of life related to the severity of the autism disorder and social and economic status. The study concluded that having a disabled child in the family, regardless of social and economic level, imposes the family to consider their child’s situation and develop their abilities to the fullest extent through having the required information of the child’s situation and searching for educational alternatives to suit their abilities.

Contribution/Originality: Families of children with an autism spectrum disorder in Jordan face many challenges in their daily lives while coping with these disorders; this study may help teachers and counselors enhance the quality of life for these families through different counseling programs.

1. INTRODUCTION

According to the fifth edition of the Diagnostic and Statistical Manual, Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by a delay or changes in social interaction and communication and restricted, repetitive behavioral patterns and activities (American Psychiatric Association, 2013). The prevalence of ASD fluctuates depending on several factors, including the size of the sample, age, early diagnosis, and cultural factors, and was estimated to affect approximately 27 out of 10,000 children in 2018 (Poovathinal et al., 2018).

Children with ASD and their parents are mostly treated in academic research as a homogeneous group rather than a heterogeneous category. Research, however, indicates that parents of children with ASD experience several...
difficulties and obstacles. Most of these difficulties are physical, social, emotional, and functional (Eapen & Guan, 2016) and are mostly related to their adjustment to their child's ASD characteristics and developmental difficulties (Hastings, 2003). Thus, several studies have indicated that parents of children with ASD suffer from psychological distress, family stress, restricted daily living activities, and lower well-being compared to parents of typically developing children (Abbeduto et al., 2004; Hyassat, 2013; Lee, Harrington, Louie, & Newschaffer, 2007). Alongside these difficulties, parents of children with ASD have responsibilities to provide care, parental services, and daily living assistance to their children, so the need to examine and improve their quality of life (QoL) becomes vital.

QoL emerged in psychology in the early 1920s and was seen as a part of positive psychology. Martin Seligman called for people to focus on the positive aspects of the individual where the origins are health and well-being rather than disease, and put forward the idea that human beings can integrate into society when they focus on the positive aspects of life (Seligman & Csikszentmihalyi, 2015). However, although the new term has gained broad attention from researchers theoretically and practically (Mandzuk & McMillan, 2005), there has been no agreement on a specific definition. The World Health Organisation (1995) defined QoL as an individual's "perception of their position in life in the context of the culture and value systems in which they live and concerning their goals, expectations, standards, and concerns", while Rogerson (1999) described it as a strong emotional relationship between the individual and their environment, and this relationship is centered on the individual's feelings and perceptions. Tree (2009) sees it as a positive outlook and appetite for life, and that belief creates the possibility of achieving goals and desires and the likelihood of having good and positive experiences instead of focusing on the negative side. Finally, Michael (2009) defined QoL as an individual's ability to perceive the good things that they will experience based on acknowledged and specific behaviors. In this study, QoL has been defined as the degree of satisfaction felt by the families of children with ASD towards the different dimensions of life. A developed QoL scale measured these dimensions: life; physical and psychological health; income; morality; interactions in family and social relationships; having support and social provision; positively engaging in daily living activities; optimism and the ability to pursue happiness, which is related to the psychological readiness of the individual; and the role of others and their ability to provide support for the family when interacting with the surrounding environment.

ASD is currently classified as a disorder that disrupts normal brain growth, which is reflected in the negative impact on the development of communicative, social, and behavioral development milestones, and it is one of the most challenging and complicated developmental disorders which significantly affects the different aspects of a child's growth (American Psychiatric Association, 2013; Shami, 2004). ASD indicates developmental disability and sensory deficits that last a lifetime and affects the child's behavioral, educational, and social aspects of life (Imam & Jawaldh, 2010), and has adverse effects on various aspects of disabled children's families and their lives (Mohammed, 2011). Literature indicates that QoL can be reached when the individual feels that their basic needs have been fully met and their primary goals have been achieved, which links their QoL with that of others. Al-Ashwal (2005) reviewed several studies related to the QoL of families of children with special needs and found that mutual effectiveness of the QoL between parents and their children is critical where mothers whose QoL was improved were more able to respond effectively to their disabled children and contribute to improving their children's QoL.

Having a child with ASD in the family brings several challenges, including psychological stress and various problems and difficulties that all family members may experience. In addition, having a child with ASD might change the route of the entire family's lives and is considered a turning point that forces them to reorganize their lives and priorities to respond to the needs of the disabled child. This can cause a variety of long-term problems, such as anxiety, introversion and social withdrawal, shame, guilt, a sense of loneliness, and loss of life meaning. They can also suffer from a lack of happiness, lack of efficiency in forming social relationships, negative social attitudes, failure to create ties and friendships, and suffer from unbalanced emotions (DeGrace & Imms, 2006). Furthermore, the difficulties can be seen based on decisions that the families make for their children as they are responsible for them and provide all the daily necessities but the burden was not taken into consideration. Also, in
most cases, those families feel that their children with ASD may be associated with a social stigma and this stigma can eventually reach the family itself (Albdirat, 2006). Research provides empirical evidence that parents of children with ASD need constant support with their physical, psychological, social, and environmental health to respond effectively to their children (Mugno, Ruta, D'Arrigo, & Mazzone, 2007), as their QoL was found to be low in several studies. Hartley, Braker, Baker, Seltzer, & Greenberg (2012) found that the QoL and satisfaction with the marital level (whether they live together or separated) of the parents of children with ASD ranged from low to moderate in favor of fathers, and there were differences in the level of QoL and satisfaction attributed to age in favor of the older parent. Kheir et al. (2012) indicated that the QoL of those families fluctuated between low to moderate, and there were differences in the level of QoL attributed to the severity of the disability in favor of children with mild symptoms. Moreover, McStay, Trembath, & Dissanayake (2014a) found that the QoL of parents of children with ASD was low, and no differences in QoL were found that could be attributed to social-economic level or scientific qualification. Pozo, Sarriá, & Briosó (2014) studied the mental health of parents who have children with ASD and its relationship with their QoL, and they found that both mental health and QoL among those parents were low.

Interestingly, it was found that the QoL and mental health among fathers was higher than mothers. Results indicated that parents of children with severe ASD had a lower QoL and mental health level than those of children with mild and moderate ASD. Thus, having a child with ASD adversely affects the quality of family life and may lead to a pessimistic view of life and, ultimately, negative expectations of future events might also be reflected in their children's disabilities and that remains with the parents permanently. The current study concentrates on the counseling needs of the families of children with ASD in the Jordanian context and detects their specific requirements to provide them with special programs to improve their QoL, and this is firmly rooted in the literature (Abdul Qadir, 2011; Arabiyat, 2011). However, several studies have proved that QoL and skills of families of children with autism can be improved after exposure to a counseling program in responding to behavioral difficulties (Abdul Qadir, 2013; Araqa, 2006; Buckley, Ente, & Rief, 2014), and conducting extended programs and workshops for families of children with autism assists in drawing their attention to the importance of QoL (McStay, Trembath, & Dissanayake, 2014b).

2. METHODS

2.1. Research Problem and Questions

Literature indicated that the term QoL gained significant attention and was defined theoretically and practically based on the disabled and their families (Darling, Senatore, & Strachan, 2012; Lundy, 2011; Taha, 2013; Wang et al., 2004). Global research in this area theoretically and practically has led to a dearth of applied research that studied this term and has sought to improve disabled families' quality of life through counseling programs in the Arab world and locally in Jordan. Concentration in Jordan was always on providing essential services for disabled children, which concentrates on enjoyment of life and requires an understanding of individuals themselves, their abilities, and socializing with others, rather than the needs of their parents who play a critical role in shaping their QoL (Mohammed, 2011). Based on the above, having an appropriate QoL can be achieved by meeting basic needs and achieving goals in essential aspects of life. Thus, there is an urgent need to provide families with appropriate counseling programs to help them achieve a good QoL (World Health Organisation, 1995). There is a lack of studies regionally and researchers did not find any previous studies in Jordan which focused on applying a counseling program to improve the QoL for families of disabled children, specifically the families of people with ASD. The current study seeks to answer the following three questions:

1. Are there significant differences at the level of statistical significance (α =0.05) between the control group and the experimental group on the QoL scale post-test?

2. Are there significant differences at the level of statistical significance (α =0.05) on the QoL scale of families of children with ASD regarding the autism spectrum disorder variable?
3. Are there significant differences at the level of statistical significance (\( \alpha = 0.05 \)) on the QoL scale of families of children with ASD regarding the variable of socioeconomic level of the family?

2.2. Research Design

In order to achieve the objectives, this study adopted a quasi-experimental approach and used a "nonequivalent control group" where the sample was chosen randomly. Participants were divided into two groups – the control group and the experimental group – where pre- and post-tests were applied before and after implementation of the programme to measure the effectiveness of the independent variable (the counseling programme) on the dependent variable (QoL level).

2.3. Participants

This study targeted families of children with ASD in Amman, Jordan who are aged 30–50 years in the 2017/2018 academic year. Thirty fathers and mothers of children with ASD were chosen randomly from three of the special education centers in Amman who agreed to participate in the study during the first semester of 2017/2018. Participants were split evenly into two groups: the control group, which consisted of 15 fathers and mothers who had not been subject to treatment, and an experimental group which also consisted of 15 fathers and mothers who had been subjected to treatment (counseling program). Table 1 shows the distribution of the sample according to the study's variables.

2.4. QoL Scale

To achieve the objectives of the current study, the QoL scale was developed for the purposes of applying it to the parents of children with ASD before and after the intervention program. It was developed based on the existing literature (Abdul Qadir, 2013; Mohammed, 2011; Taha, 2013), and Arabic literature was also used as it appears to be realistically closer to the study's sample (conservative cultural background) and context. However, global literature was not omitted and was utilized where appropriate. Researchers identified the QoL dimensions and reviewed the standards in previous scales which dealt with aspects of the QoL in order to select the appropriate items and formulation (Abdullah, 2014; Abu Halawa, 2010; Ansari, 1998; Iraqi & Madloum, 2005). The final draft of the scale consisted of 47 items distributed among seven dimensions: physical health (1–7), satisfaction with life (8–15), social interaction (16–21), daily living activities (22–28), income (29–34), mental health (35–41), and happiness (42–47). Participants were asked to respond to each item by using a three-point Likert scale: always, sometimes, and rarely. The majority of the participants took approximately 45 minutes to complete the entire scale.

2.5. Validity and Reliability

The validity and reliability of the developed scale were assured. First, the initial draft of the scale was reviewed by ten experts in special education at three Jordanian universities. Based on their revision, the language in some
items was modified, some items were omitted and others were added, and the final draft was then produced consisting of 47 items. Second, construct validity was carried out. Construct validity refers to the ability of the scale to measure what it claims. The researchers used the correlation between the respective item and the total sum score (with the respective item) after it was applied to a pilot sample of 25 parents of children with ASD chosen from outside the study sample. Results showed that all of the correlation coefficient values of all of the tool items have fluctuated between 0.35 and 0.80, which is statistically significant at the level of $\alpha = 0.05$. This indicator is acceptable compared to previous studies and indicates the internal consistency between the items and the total score of the instrument. Reliability was verified through applying the scale to a pilot sample from outside the study sample which consisted of (25) fathers and mothers of children with ASD using the reliability coefficient manner, a test re-test procedure, and then calculating the Pearson correlation coefficient with a two-week interval between the two applications. Results indicated that the total reliability coefficient of the instrument was 0.83. Also, reliability was calculated by extracting the reliability of the instrument coefficient of the internal consistency coefficient (Cronbach’s alpha), which reached 0.91. Reliability coefficients were also calculated for the dimensions of QoL and are shown in Table 2.

| Dimension             | Test re-test reliability | Internal consistency |
|-----------------------|--------------------------|----------------------|
| Physical health       | 0.92                     | 0.86                 |
| Life satisfaction     | 0.94                     | 0.85                 |
| Social interaction    | 0.90                     | 0.82                 |
| Daily activities      | 0.91                     | 0.82                 |
| Income                | 0.92                     | 0.86                 |
| Mental health         | 0.89                     | 0.86                 |
| Happiness             | 0.87                     | 0.88                 |
| Total                 | 0.83                     | 0.91                 |

2.6. Scale Correction

The correction was considered by giving weights (3, 2, 1) to the responses (always, sometimes, and rarely), and vice versa when items are negative, noting that negative items in the scale are (1, 2, 4, 5, 6, 7, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41), where the highest mark is 141 and the lowest mark is 47.

2.7. Developing the Counseling Program

A counseling program was developed using related literature and psychological counseling was reviewed; this included determining appropriate counseling methods to respond to families with special needs, specifically families of children with ASD, and how to translate counseling sessions for practical implementation (Abdul Qadir, 2011; Arabiyat, 2011). In the next stage, literature on QoL was reviewed (Mohammed, 2011; Taha, 2013) to determine the aspects of QoL. Counseling programs that were used in previous studies were also reviewed and used, especially those that concentrated on improving the QoL for families with special needs, such as Araqa (2006), Abdul Qadir (2013) and Abdullah (2014), by determining the counseling program objectives and the time needed to implement them. Literature was also used to identify the necessary tools and procedures, determine the counselor’s role, the role of the agent in the meeting, and how to evaluate each session. Based on the above steps, a counseling program was developed and then presented to a group of arbitrators in psychotherapy, family counseling, and special education to verify and validate its content to where an 80% agreement between arbitrators had been reached. After evaluating the program, appropriate adjustments were made through deletion or addition, and the final draft of the program was prepared. Finally, the researchers supervised the counseling program's training process in collaboration with fellow specialists in the field of family counseling to implement the counseling sessions. The role
of the counselors (researchers) included implementing the program sessions, managing meetings, directing participants' reactions and answers towards the discussion, and showing commitment and positivity. The clients' role (the experimental group) was to acknowledge and understand the current issue, provide answers and solutions, actively participate in the discussion and work with the group, and rate the sessions. The period of implementation of the counseling program was four weeks, from May 1st to May 29th, 2018, and in its final form consisted of three main sessions: the preliminary hearing lasting 45 minutes, eight counseling sessions of 45 minutes each, and a final session of 45 minutes (see Table 3).

### Table 3. Sessions, titles, and techniques.

| Session   | Title                                      | Technique                                      | Week |
|-----------|--------------------------------------------|-----------------------------------------------|------|
| Preliminary | Introducing and applying the pre-test of the study's tool | Lecture                                      | 1    |
| First     | Counseling process, counseling relationship, the role of counselor and client and the importance of counseling in the life of the families of children with special needs | Lecture, discussion, and dialogue              | 1    |
| Second    | The importance of physical health and maintaining it | Discussion, dialogue, and foresight           | 2    |
| Third     | Life satisfaction                          | Strategies to deal with stress                | 2    |
| Fourth    | Social interaction skills                  | Developing skills in social networking and support | 3    |
| Fifth     | Daily life activities and free time activities | Developing social communication skills, stress management | 3    |
| Sixth     | Financial management                       | Relaxation and cognitive evaluation           | 4    |
| Seventh   | Mental health                              | Relaxation and cognitive therapy              | 4    |
| Eighth    | Positivity and happiness                   | Developing self-efficacy                      | 4    |
| Final     | Applying the post-test of the study's tool | Lecture                                       | 4    |

The QoL scale was applied to both experimental and control groups (pre-test) to verify the equality of the two groups. To do this, the mean and standard deviations for the sample's pre-performance on the quality of life scale were extracted depending on the variable groups (experimental and control). A t-test was used to determine the statistical differences between the means, as shown in the below table.

### Table 4. Mean and standard deviations, and t-test depending on the group variable on the QoL scale (pre-test).

| Group        | Number | SMA  | SD    | Value of T | DF | Statistical Significance |
|--------------|--------|------|-------|------------|----|--------------------------|
| Total score  |        |      |       |            |    |                          |
| (pre)        |        |      |       |            |    |                          |
| Control      | 15     | 1.93 | 0.129 | -1.720     | 28 | 0.97                     |
| Experimental | 15     | 1.79 | 0.275 |            |    |                          |

It can be seen from Table 4 that there was no significant difference ($\alpha = 0.05$) between the means in the pre-test of the QoL scale depending on the variable group (control and experimental) where the value of $T$ was 1.720 within the statistically significant value of 0.97. This result indicates that the two groups were equal before applying the counseling program. The counseling program was applied to the experimental group after conducting a meeting with its members to clarify the program and its important goals in raising the QoL level and the statement of positive significance in life, as well as agreeing on a mechanism for implementing the program, the duration and location of the sessions, and its applied techniques. The QoL scale was applied as a pre-test on the experimental and control groups to verify the counseling program’s effectiveness. The data collected was then entered into SPSS to
analyze it. After the analysis, the results were extracted, and appropriate recommendations were made based on the study's findings.

2.8. Analysis

Results for the first question.

Are there significant differences at the level of statistical significance ($\alpha = 0.05$) between the control group and the experimental group on the post-test of the QoL scale?

To answer this question, the mean and standard deviations were calculated for the sample's performance depending on the variable groups (control and experimental) where the t-test was used, as shown in Table 5.

Table 5. Mean and standard deviations, and t-test depending on the group variable.

| Dimension          | Group    | N  | SMA | SD  | T     | DF | Statistical Significance |
|--------------------|----------|----|-----|-----|-------|----|--------------------------|
| Physical health    | Control  | 15 | 2.22| 0.295| 5.447 | 28 | 0.000                    |
|                    | Experimental | 15 | 2.75| 0.238|       |    |                          |
| Life satisfaction  | Control  | 15 | 2.07| 0.455| 7.219 | 28 | 0.000                    |
|                    | Experimental | 15 | 2.94| 0.114|       |    |                          |
| Social interaction | Control  | 15 | 2.14| 0.308| 0.795 | 28 | 0.000                    |
|                    | Experimental | 15 | 2.69| 0.314|       |    |                          |
| Daily life activities | Control  | 15 | 2.07| 0.503| 6.152 | 28 | 0.000                    |
|                    | Experimental | 15 | 2.91| 0.177|       |    |                          |
| Financial management | Control  | 15 | 2.08| 0.538| 1.006 | 28 | 0.323                    |
|                    | Experimental | 15 | 2.32| 0.773|       |    |                          |
| Mental health      | Control  | 15 | 2.20| 0.491| 2.154 | 28 | 0.040                    |
|                    | Experimental | 15 | 2.63| 0.593|       |    |                          |
| Happiness          | Control  | 15 | 2.19| 0.217| 10.920| 28 | 0.000                    |
|                    | Experimental | 15 | 2.89| 0.121|       |    |                          |
| Total post-test    | Control  | 15 | 2.14| 0.152| 9.580 | 28 | 0.000                    |
|                    | Experimental | 15 | 2.74| 0.193|       |    |                          |

Table 5 shows statistical differences at the level ($\alpha = 0.05$) between the two groups in all dimensions, except financial management in favor of the experimental group. This finding demonstrates the effectiveness of the counseling program in improving the QoL of families with children with ASD.

Results for the second question.

Are there significant statistical differences at the level of significance ($\alpha = 0.05$) on the QoL post-test scale between families of children with ASD depending on the variable of the severity of the disability?

To answer this question, the mean and standard deviations were extracted for the performance of the sample depending on the severity of the disability (see Table 6).

Table 6 shows an ostensible variation in the averages and standard deviations in the post-test of the QoL scale depending on the severity of the disability. To interpret the statistical differences between the averages, a one-way analysis of variance (ANOVA) was used, as shown in Table 7.

It can be seen from Table 7 that there were no statistically significant differences at the level of significance ($\alpha = 0.05$) due to the severity of disability in all dimensions of the QoL scale and the scale as a whole of the families of children with ASD.

Results related to the third question.

Are there significant differences ($\alpha = 0.05$) on the QoL scale for families of children with ASD according to the variable of socioeconomic level of the family?
Table 6. Mean and standard deviations for the measurement of QoL depending on the severity of disability.

| QoL                | Category | N  | SMA | SD   |
|--------------------|----------|----|-----|------|
| Physical health    | Mild     | 7  | 2.55| 0.498|
|                    | Moderate | 10 | 2.56| 0.378|
|                    | Severe   | 13 | 2.40| 0.315|
|                    | Total    | 30 | 2.49| 0.378|
| Life satisfaction  | Mild     | 7  | 2.52| 0.547|
|                    | Moderate | 10 | 2.44| 0.710|
|                    | Severe   | 13 | 2.55| 0.449|
|                    | Total    | 30 | 2.50| 0.552|
| Social interaction | Mild     | 7  | 2.29| 0.488|
|                    | Moderate | 10 | 2.53| 0.483|
|                    | Severe   | 13 | 2.40| 0.337|
|                    | Total    | 30 | 2.42| 0.412|
| Daily activities   | Mild     | 7  | 2.47| 0.686|
|                    | Moderate | 10 | 2.53| 0.576|
|                    | Severe   | 13 | 2.47| 0.545|
|                    | Total    | 30 | 2.49| 0.569|
| Physical condition | Mild     | 7  | 1.93| 0.892|
|                    | Moderate | 10 | 2.58| 0.557|
|                    | Severe   | 13 | 2.05| 0.502|
|                    | Total    | 30 | 2.20| 0.666|
| Psychological health| Mild   | 7  | 2.80| 0.231|
|                    | Moderate | 10 | 2.39| 0.560|
|                    | Severe   | 13 | 2.23| 0.651|
|                    | Total    | 30 | 2.41| 0.578|
| Happiness          | Mild     | 7  | 2.52| 0.495|
|                    | Moderate | 10 | 2.53| 0.407|
|                    | Severe   | 13 | 2.55| 0.363|
|                    | Total    | 30 | 2.54| 0.396|
| Total post-test    | Mild     | 7  | 2.45| 0.392|
|                    | Moderate | 10 | 2.50| 0.435|
|                    | Severe   | 1  | 2.38| 0.276|
|                    | Total    | 30 | 2.44| 0.354|

To answer this question, the mean and standard deviations for the QoL scale of the sample according to the socioeconomic level of the family were extracted; Table 8 illustrates the results.

Table 8 shows ostensible variations in mean and standard deviations in the post-test results of the QoL scale according to the variable of socioeconomic level. The one-way ANOVA was used to interpret the significance of statistical differences, as shown in Table 9.

Table 9 shows no statistically significant differences at the level of significance ($\alpha = 0.05$) attributed to the variable of socioeconomic status of the family in all dimensions of the QoL scale, and on the scale as a whole, among families of children with ASD.

Table 7. Variance analysis (one-way ANOVA) pre-test of the impact of the QoL scale.

| QoL                  | Source               | Sum of squares | DF | Average squares | F    | Statistical significance |
|----------------------|----------------------|----------------|----|-----------------|------|-------------------------|
| Physical health      | Between groups       | 0.186          | 2  | 0.098           | 0.635| 0.537                  |
|                      | Inside groups        | 3.961          | 27 | 0.147           |      |                         |
|                      | Overall              | 4.147          | 29 |                 |      |                         |
| Life satisfaction    | Between groups       | 0.071          | 2  | 0.035           | 0.109| 0.897                  |
|                      | Inside groups        | 8.757          | 27 | 0.324           |      |                         |
The overall dimensions of class

| Social interaction | Overall | 8.828 | 29 | 0.754 | 0.480 |
|--------------------|---------|-------|----|--------|--------|
| Between groups     | 0.261   | 0.130 | 0.754 | 0.480 |
| Inside groups      | 4.670   | 0.173 | 0.754 | 0.480 |
| Overall            | 4.931   | 29    | 0.754 | 0.480 |

| Daily activities   | Overall | 8.828 | 29 | 0.754 | 0.480 |
|--------------------|---------|-------|----|--------|--------|
| Between groups     | 0.022   | 0.111 | 0.031 | 0.969 |
| Inside groups      | 9.353   | 0.346 | 0.031 | 0.969 |
| Overall            | 9.375   | 29    | 0.031 | 0.969 |

| Physical condition | Overall | 8.828 | 29 | 0.754 | 0.480 |
|--------------------|---------|-------|----|--------|--------|
| Between groups     | 2.273   | 1.136 | 2.899 | 0.072 |
| Inside groups      | 10.583  | 0.392 | 0.072 | 0.072 |
| Overall            | 12.856  | 29    | 0.072 | 0.072 |

| Psychological health | Overall | 8.828 | 29 | 0.754 | 0.480 |
|----------------------|---------|-------|----|--------|--------|
| Between groups       | 1.465   | 0.733 | 2.406 | 0.109 |
| Inside groups        | 8.222   | 0.305 | 2.406 | 0.109 |
| Overall              | 9.688   | 29    | 2.406 | 0.109 |

| Happiness           | Overall | 8.828 | 29 | 0.754 | 0.480 |
|---------------------|---------|-------|----|--------|--------|
| Between groups       | 0.004   | 0.002 | 0.012 | 0.988 |
| Inside groups        | 4.534   | 0.108 | 0.012 | 0.988 |
| Overall              | 4.538   | 9     | 0.012 | 0.988 |

| Overall Dimensions of class | Overall | 8.828 | 29 | 0.754 | 0.480 |
|-----------------------------|---------|-------|----|--------|--------|
| Between groups              | 0.082   | 0.041 | 0.314 | 0.733 |
| Inside groups               | 3.542   | 0.131 | 0.314 | 0.733 |

Table 8. Mean and standard deviations of the pre-test of the QoL according to the socioeconomic level variable of the family.
3. DISCUSSION

Findings from this study have shown the counseling program's effectiveness in improving the QoL of the families of children with ASD, except for the financial income aspect. On the one hand, the results can be interpreted by the impact of the counseling program in raising awareness of the importance of a good quality of life and its dimensions (physical and mental health, participation in daily living activities, the acquisition of social interaction skills, happiness, and life satisfaction). On the other hand, participants reported that their sense of appreciation of themselves in their social context had increased. Interaction and cooperation during the counseling program sessions assisted participants in gaining experience and their feelings of happiness. Moreover, during the discussions they gained the necessary experience to cope with difficulties, they responded effectively to the needs of their disabled children, and transformed a negative, pessimistic outlook on life to a positive, optimistic one.

It appeared that participants' attitudes had changed where their behavioral perceptions of life were also modified, making them more positive by increasing their sense of satisfaction and happiness. These findings are consistent with Buckley et al. (2014), who indicated that the families of children with ASD with a low QoL had improved after exposure to a counseling program. This is also in line with the findings of Iraqi & Madloum (2005) and Abdul Qadir (2013) who showed an improvement in the QoL for families of children with special needs who received training via counseling programs.

In addition, the results showed that the severity of the disability did not have an impact on every dimension of the QoL scale for families of children with ASD. From what was reported in the literature, it can be understood that the sources of stress within families who have a disabled child (regardless of the severity of the disability) are the limitations or constraints in carrying out daily life activities (Phetrasuwan & Shandor, 2009). Having a disabled child is considered a source of psychological stress and social and emotional difficulties, which are negatively reflected in the parents' psychological and physical health. Al-Mutairi (2006) indicated that having a disabled child

| QoL                      | Source       | Sum of Squares | DF | Average Squares | F     | Statistical Significance |
|--------------------------|--------------|----------------|----|-----------------|-------|--------------------------|
| Physical health          | Between groups | 0.236          | 2  | 0.118           | 0.814 | 0.454                    |
|                          | Inside groups | 3.911          | 27 | 0.145           |       |                          |
|                          | Overall       | 4.147          | 29 |                 |       |                          |
| Life satisfaction        | Between groups | 0.115          | 2  | 0.07            | 0.178 | 0.838                    |
|                          | Inside groups | 8.713          | 27 | 0.323           |       |                          |
|                          | Overall       | 8.828          | 29 |                 |       |                          |
| Social interaction       | Between groups | 0.536          | 2  | 0.268           | 1.647 | 0.211                    |
|                          | Inside groups | 4.394          | 27 | 0.163           |       |                          |
|                          | Overall       | 4.931          | 29 |                 |       |                          |
| Daily activities         | Between groups | 0.097          | 2  | 0.049           | 0.141 | 0.869                    |
|                          | Inside groups | 9.278          | 2  | 0.344           |       |                          |
|                          | Overall       | 9.375          | 29 |                 |       |                          |
| Physical condition       | Between groups | 0.553          | 2  | 0.277           | 0.607 | 0.552                    |
|                          | Inside groups | 12.302         | 27 | 0.456           |       |                          |
|                          | Overall       | 12.856         | 29 |                 |       |                          |
| Psychological health     | Between groups | 0.506          | 2  | 0.253           | 0.744 | 0.485                    |
|                          | Inside groups | 9.182          | 27 | 0.340           |       |                          |
|                          | Overall       | 9.688          | 29 |                 |       |                          |
| Happiness                | Between groups | 0.189          | 2  | 0.094           | 0.586 | 0.564                    |
|                          | Inside groups | 4.349          | 27 | 0.161           |       |                          |
|                          | Overall       | 4.538          | 29 |                 |       |                          |

Table 9. One-way analysis of variance of the impact of socioeconomic level.
in the family contributes to a reduction in the level of social interaction for parents as a result of feelings of social embarrassment, inferiority, shame, and guilt, which are reflected in social relations and the lack of formation of social bonds with others.

The current results differ from some previous studies which indicated that there are differences in the levels of life satisfaction among parents of children with disabilities and autism spectrum disorder that can be attributed to the variable of the severity of disability in favor of a mild level of disability (DeGrace & Imms, 2006; Kheir et al., 2012; Pozo et al., 2014; Wang et al., 2004).

The results showed that there were no statistically significant attributes to the variable of socioeconomic level of the family in all dimensions of QoL scale, and the instrument as a whole, of families of children with ASD. These finding can be interpreted in light of what indicated by Lee (2009) – that having a disabled child in the family, regardless of social and economic level, forces the family to contemplate the child's situation and develop his or her abilities to the fullest extent through having relevant information and searching for educational alternatives that suit the child's abilities. Families also strive to provide the support to facilitate the growth of the child and his or her education until they reach the stage of independence. Hence, every family strives to avail of all support and sources regardless of their economic and social levels to help the autistic child to adjust compared to siblings and peers in their community. The results from this study differ from the results of the study by Wang et al. (2004), which showed differences in the levels of life satisfaction among parents that were attributed to the families' economic level in favor of families with a high income.

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REFERENCES
Abbeduto, L., Selzter, M. M., Shattuck, P., Krauss, M. W., Orsmond, G., & Murphy, M. M. (2004). Psychological well-being and coping in mothers of youths with autism, down syndrome, or fragile X syndrome. American Journal on Mental Retardation, 109(3), 237-254. Available at: https://doi.org/10.1352/0895-8017(2004)109<3237:pwacim%3E2.0.co;2.

Abdul Qadir, A. (2011). Psychological counseling for people with special needs. Cairo: Dar Al-Mustafa.

Abdul Qadir, A. (2013). The effectiveness of the early intervention in improving the quality of life of children of autism. Paper presented at the 13th Forum - "Gulf Disability Society under the theme of" Early Intervention - Investment for the Future ", during the period 2-4 April 2013, Manama- Bahrain.

Abdullah, R. (2014). The effectiveness of an instructional program in improving the quality of life of children's families. Journal of Faculty of Education - Banha University, Egypt, 98(c 1), 425-446.

Abu Halawa, M. (2010). Quality of life, concept, and dimensions. Paper presented at the Seventh Scientific Conference, Faculty of Education, Kafir El-Sheikh University, entitled "Quality of life as an Investment for Educational and Psychological Sciences, 13-14 / 4/2010.

Al-Ashwal, A. E. (2005). The quality of life from a social, psychological, and medical perspective. Paper presented at the Proceedings of the Third Scientific Conference: The Psychological and Educational Development of the Arab Man in Light of Quality of Life.

Al-Mutairi, F. (2006). Sources of psychological stress in mothers of autistic children in riyadh, Saudi Arabia and its relation to some variables. Unpublished Master Thesis, University of Jordan, Amman, Jordan.

Albdirat, N. (2006). Sources of psychological stress in the brothers of children with autism and their relation to some personal and family variables. Unpublished Master Thesis, Amman Arab University, Amman, Jordan.

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Arlington, VA: Author.

Ansari, B. M. (1998). Optimism and pessimism: Concept, measurement and comments. Kuwait: Scientific Publishing Council, Kuwait University.
Arabiyat, A. (2011). Counselling people with special needs and their families. Amman: Dar Al Shorouk.

Arafa, M. S. (2006). The effectiveness of a parental guidance program for Improving the quality of life. Journal of the Faculty of Education - Banha University, Egypt, 16(22), 218-258.

Buckley, T. W., Ente, A. P., & Ruaf, M. B. (2014). Improving a family’s overall quality of life through parent training in pivotal response treatment. Journal of Positive Behavior Interventions, 16(1), 60-63. Available at: https://doi.org/10.1077/1098300714483177.

Darling, C. A., Senatore, N., & Strachan, J. (2012). Fathers of children with disabilities: Stress and life satisfaction. Stress and Health, 28(4), 269-278. Available at: https://doi.org/10.1002/smi.1427.

DeGrace, B., & Imms, C. (2006). Daily activities of families with a child with severe autism revolved around the need to occupy and pacify the child: families felt robbed of meaning and satisfaction in family life. Australian Occupational Therapy Journal, 53(2), 136-140. Available at: https://doi.org/10.1111/j.1440-1630.2006.00556.x.

Eapen, V., & Guan, J. (2016). Parental quality of life in autism spectrum disorder: Current status and future directions. Acta Psychopathologica, 2(1), 1-14. Available at: https://doi.org/10.4172/2469-6676.100031.

Hartley, S., Braker, E., Baker, J., Seltzer, M., & Greenberg, J. (2012). Marital satisfaction and life circumstances of grown children with autism across (7) Years. Journal of Family Psychology, 26(5), 688-697. Available at: https://doi.org/10.1037/a0029354.

Hastings, R. P. (2003). Child behaviour problems and partner mental health as correlates of stress in mothers and fathers of children with autism. Journal of Intellectual Disability Research, 47(4-5), 231-237. Available at: https://doi.org/10.1046/j.1365-2788.2003.00485.x.

Hyassat, M. (2013). Jordanian parents of young children with disabilities perspectives on care, coping, and service provision (pp. 229-231). Jordan: Scholars' Press.

Imam, M., & Jawaldeh, F. (2010). Autism and theory of mind. Amman: Dar Althgfxa.

Iraqi, S., & Madloum, R. (2005). The effectiveness of a parental guidance program to improve the quality of life of depressed students. Journal of the Faculty of Education- Tanta University, 2(34), 468-509.

Kheir, N., Ghoneim, O., Sandridge, A., Al-Islmil, M., Hayden, S., & Al-Rawi, F. (2012). Quality of life of caregivers of children with autism in Qatar. The International Journal of Research and Practice, 16(3), 293-298. Available at: https://doi.org/10.1017/s1366-2788.2003.00485.x.

Lee, L., Harrington, R., Louie, B., & Newschaffer, C. (2007). Children with autism: Quality of life and parental concerns. Journal of Autism and Developmental Disorders, 38(6), 1147-1160.

Lee, G. K. (2009). Parents of children with high functioning autism: How well do they cope and adjust? Journal of Developmental and Physical Disabilities, 21(2), 93-114. Available at: https://doi.org/10.1007/s10882-008-9128-2.

Lundy, H. (2011). Parental stress, socioeconomic status, satisfaction with services, and family quality of life among parents of children receiving special education services. ProQuest LLC, Ph.D. Dissertation, Georgia State University.

Mandzuk, L. L., & McMillan, D. E. (2005). A concept analysis of quality of life. Journal of Orthopaedic Nursing, 9(1), 12-18.

McStay, R. L., Trembath, D., & Dissanayake, C. (2014a). Stress and family quality of life in parents of children with autism spectrum disorder: Parent gender and the double ABCX model. Journal of Autism and Developmental Disorders, 44(12), 3101-3118. Available at: https://doi.org/10.1007/s10803-014-2178-7.

McStay, R. L., Trembath, D., & Dissanayake, C. (2014b). Maternal stress and family quality of life in response to raising a child with autism: From preschool to adolescence. Research in Developmental Disabilities, 35(11), 3119-3130. Available at: https://doi.org/10.1016/j.ridd.2014.07.043.

Michael, A. (2009). The role of optimism and working alliance and its utility in predicting therapeutic outcomes in counseling relationship. Doctoral Dissertation. Old Dominion University. The USA.

Mohammed, S. (2011). Quality of life and coping strategies for the deaf and the hearing impaired: An analytical study. Journal of the Faculty of Education in Banha, 87(2), 217-250.
Mugno, D., Ruta, L., D’Arrigo, V. G., & Mazzone, L. (2007). Impairment of quality of life in parents of children and adolescents with pervasive developmental disorder. *Health and Quality of Life Outcomes, 5*(1), 1-9. Available at: https://doi.org/10.1186/1477-7525-5-22.

Phetrasuwan, S., & Shandor, M. M. (2009). Parenting stress in mothers of children with autism spectrum disorders. *Journal for Specialists in Pediatric Nursing, 14*(3), 157-165.

Poovathinal, S. A., Anitha, A., Thomas, R., Kaniambattam, M., Melempatt, N., Anilkumar, A., & Meena, M. (2018). The global prevalence of autism: A mini-review. *SF J Autism, 2*(1), 117-121.

Pozo, P., Sarriá, E., & Brioso, A. (2014). Family quality of life and psychological well-being in parents of children with autism spectrum disorders: A double ABCX model. *Journal of Intellectual Disability Research, 58*(5), 442-458. Available at: https://doi.org/10.1111/jir.12042.

Rogerson, R. J. (1999). Quality of life and city competitiveness. *Urban Studies, 36*(5-6), 969-985.

Seligman, M. E., & Csikszentmihalyi, M. (2015). Positive psychology: An introduction (pp. 279-298). New York, Netherlands: Springer.

Shami, W. (2004). *Secrets of autism: its forms, causes, and diagnosis*. Saudi Arabia: Jeddah Centre for Autism.

Taha, N. (2013). The quality of life of parents and their relationship to the happiness of their deaf children. *Journal of Psychology - Egypt, 26*(97), 152-155.

Tree, H. (2009). *Multiple sclerosis severity, pain intensity, and psychosocial factors: associations with perceived social support, hope, optimism, depression, and fatigue*. Dissertation of Doctoral, University of Central Missouri, USA.

Wang, M., Turnbull, A. P., Summers, J. A., Little, T. D., Poston, D. J., Mannan, H., & Turnbull, R. (2004). Severity of disability and income as predictors of parents’ satisfaction with their family quality of life during early childhood years. *Research and Practice for Persons with Severe Disabilities, 29*(2), 82-94. Available at: https://doi.org/10.2511/rpsd.29.2.82.

World Health Organisation. (1995). Measuring quality of life. Retrieved from https://www.who.int/healthinfo/survey/whoqol-qualityoflife/en/. [Accessed 23rd February 2019].