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Comparison of Quality of Life of Mothers and Fathers of Children with Autism, Baghdad 2024

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Abstract: The following essay will provide a concise overview of the existing literature on the subject.

Autism is a neuropsychiatric developmental syndrome that manifests before the age of three. The common features of these disorders are difficulties in acquiring cognitive, linguistic, social, and motor skills. Consequently, many parents of children with autism are confronted with additional challenges, including stigma and psychological distress, such as stress and depression, arising from their child's behaviour. Consequently, the presence of an autistic child in a family is hypothesised to have a detrimental effect on the parents' quality of life.

Objectives:

The primary objective is to assess and compare the quality of life of mothers and fathers of children with autism and to explore the association of quality of life with some sociodemographic features.

Subjects and methods:

A cross-sectional study was conducted on 200 parents of children with autism from 1st February to 1st August 2024. The study included 100 fathers and 100 mothers at the Children Welfare Teaching Hospital, the Central Teaching Hospital of Pediatrics, and the Baghdad Autism Department. Data from the questionnaire was analysed to determine the quality of life of both parents with a child with autism. The data was collected through direct interviews with all participants using the World Health Organization Quality of Life Scale (WHOQOL-BREF), which comprises four main domains: physical, psychological, social, and environmental. The inclusion criteria were as follows: Iraqi parents of children with autism who were willing to participate in the study and parents with an autistic child who had received a diagnosis of at least six months. The exclusion criteria were as follows: parents of children with other psychiatric or neurological disorders and parents with psychological problems or disability.

The results of the study are as follows:

With regard to the quality of life of parents, the mean total quality of life score for the group of fathers included in the study was 40.63 ± 3.3, while for the mothers, it was 41.18 ± 4.1. The mean total QoL score for the included parents was 40.91 ± 3.8. The distribution of total QoL among the fathers was found to be poor in 37% of cases and moderate in 63%, while among the mothers, it was found to be poor in 33% of cases and moderate in 67%. The distribution of QoL among the included parents was found to be poor in 35% of cases and moderate in 65%. The environment and psychological domains exhibited the most significant mean impacts on both the included fathers and mothers.

The association between the World Health Organization Quality of Life - BREF domains and the demographic data of the included children and parents revealed statistically significant better quality of life for the physical domain with child age, duration since diagnosis, parent age, and marital status. A statistically significant association was identified between the duration since diagnosis and the psychological domain of the WHOQOL-BREF.

Conclusion:

The study's findings indicate that the quality of life of parents of autistic children is moderately impacted. The study identified several factors that contributed to this effect, including child age, duration since diagnosis, parent age, and marital status.

Keywords: Autism spectrum disorder, Quality of life of parents.

Introduction

Autism spectrum disorder (ASD) provides a clinically heterogeneous group of neurodevelopmental disorders starting in early development with impairments in social communication and with unusual restricted and repetitive behaviors and interests [1]. As for the prevalence of autism, it apparently doubled from around 0.5/1000 during the 1960s-70s to 1/1000 when the advisory all clinical practitioners began using the diagnostic and statistical manual mental disorder, 3rd edition (DSM-III) definition, and doubled again to 2/1000 by the early 21st century [2]. Some CDC's Autism and Developmental Disabilities Monitoring (ADDM) Network estimates show that about 1 in 36 children has been identified with ASD [3].

Despite a lack of uniformity in ASD symptom expression, an ASD symptomatology often for several years requires direct family support in special parents. Hence, having a family member who exhibits ASD-like behaviors, whether challenging behaviors or sleep disturbances, can easily destabilize and challenge the entire family system, mostly burdening the quality of life (QoL) and the relationship quality of closer family members such as siblings and parents [4].

Conventionally, treatment for individuals with ASD includes interventions that typically aim to increase the adaptive skills of the individual and lessen the impact of associated symptoms. Various approaches were tried, with growing favor being given to parent-mediated interventions and parent training [4].

Health and all-around adjustment of the child may be affected by the emotional stability of the parents, wherein parental stress, for instance, may draw resources away from coping for both parents and children and hinder their capabilities to solve problems [5].

Quality of life (QoL) is a broad-based concept that considers the physical health, psychological state, social relationships, personal beliefs, etc. It entails complex and extensive attributes permitting assessment of adjustment, both good and bad, across several functional domains. Recently, it has been setting a mark in healthcare studies and clinical practices, especially in the field of mental health. As stated by the World Health Organization (WHO), QoL is a very subjective concept and is greatly influenced by cultural settings, ethical values, and personal goals of an individual. All of these, put together, give a wide perspective in looking into the entire well-being of an individual [6].

Material and method

3.1 Study design: The study will be of a descriptive cross-sectional comparative nature, with a modicum of analytical component.

3.2 Study duration: The present study was conducted during the period from 1st February 2024 to 1st August 2024.

3.3 Setting of the study and sample size:

The study involved a convenient sample of 100 fathers and 100 mothers having a child with autism. Participants were recruited on an equal basis from the Autism departments of the Children Welfare Teaching Hospital and the Central Teaching Hospital of Pediatrics, both located in Baghdad, Iraq.

3.4 Inclusion criteria:

1. Iraqi parents of children with autism who agreed to participate in the study.

2. Parents with an autistic child who had received a diagnosis for at least six months were included.

3.5 Exclusion criteria:

1. Parents of children with other psychiatric or neurological disorders.

2. Parents with psychological problems or disability.

3.6 Data collection tools:

The World Health Organization Quality of Life Scale (WHOQOL-BREF) is a form of data collection that has been validated (in Arabic and English) [48] (see Appendix 1). The data was collected through direct interviews with all included parents. The instrument utilised in this study comprised two sections.

The first part consisted of demographic data of the child (age of child, child gender, autistic child order, age of diagnosis of autism in months) and demographic data of the parents (parent age, other autistic child in family, other child with disability/chronic disease, current sex, marital status, number of children and socioeconomic status of family).

The socioeconomic status of the family was estimated according to the following formula:

SES = Education + Occupation + House ownership * 0.5 + Car ownership * 0.1 + (age-20)/100 – Retired/unemployed/deceased [49]

The second portion of the questionnaire is concerned with the assessment of quality of life. This section consists of 26 items in total, of which two items address global QoL and general health perception. The remaining 24 items are divided into four domains of quality of life: firstly, the physical domain (seven items), with questions 3, 4, 10, 15, 16, 17, and 18 included. An exemplar item from this domain is: "To what extent do you feel that physical pain prevents you from doing what you need to do?" The subsequent domain pertains to psychological factors (comprising six items), encompassing questions five, six, seven, 11, 19, and 26. An illustrative item in the psychological domain is, "To what extent do you find life enjoyable?". The third domain is that of the social domain, which contains three items, namely questions 20, 21, and 22. An example of a social domain item is, "How satisfied are you with your personal relationships?" The final domain, the environmental domain, contains eight items, namely questions 8, 9, 12, 13, 14, 23, 24, and 25. One item example in the environmental domain could be: "To what extent do you feel secure in everyday living?

For this reason, a 5-point Likert scale ranging from 1-5 (not at all to extremely satisfied) or from (very dissatisfied to very satisfied) was approved for this survey instrument, with each question having five possible answers and each answer being given a different score. For the most part, the worst possible state of health is worth 1 point, while the best possible state of health is worth 5 points. Exceptions to this pattern were questions 3, 4, and 26, where we inverted the values.

6-x (x=any score Q3, Q4, or Q26) The score of a domain for each of the health domains is then derived by averaging the response points for each domain across questions (total score divided by number of questions) and multiplying the result by 4.

Physical health = 4x ((6 - Q3) + (6 - Q4) + Q10 + Q15 + Q16 + Q17 + Q18)/7 Mental health = 4x (Q5 + Q6 + Q7 + Q11 + Q19 + (6 - Q26))/6 Social relations = 4x (Q20 + Q21 + Q22)/3 Environment = 4x (Q8 + Q9 + Q12 + Q13 + Q14 + Q23 + Q24 + Q25)/8 Finally, the four domain scores were converted to a scale from 0 to 100 to obtain transformed scores. This was done by subtracting four from each of the domain scores and multiplying each of the differences by 100/16 or by the number 6.25. 0 represents the worst possible state of health, while 100 represents the most ideal state of health in that domain. The patient's health is therefore assessed in separate physical, psychological, social, and environmental domains.

Results

In Table 1, more than half (55%) of the included parents aged more than 30 years. The vast majority of included parents (96%) were married. Number of children was 1-2 (47.5%), 3-4 (45.5%) or more than 4 (7%). Socioeconomic status was high in 36%, moderate in 45.5%, and low in 18.5%.

Table (1): Distribution of sociodemographic data of both parents, fathers, and mothers

Sociodemographic variables		Both parents N = 200	Fathers N = 100	Mothers N = 100
Parent age in years	**20 – 30 years**	90 (45%)	41 (41%)	49 (49%)
	More than 30 years	110 (55%)	59 (59%)	51 (51%)
Marital status	**Married**	192 (96%)	96 (96%)	96 (96%)
	Divorced	6 (3%)	4 (4%)	2 (2%)
	Widow	2 (1%)	0 (0%)	2 (2%)
Number of children	**One – Two**	95 (47.5%)	47 (47%)	48 (48%)
	Three - Four	91 (45.5%)	46 (46%)	45 (45%)
	More than four	14 (7%)	7 (7%)	7 (7%)
Socioeconomic status	**High**	72 (36%)	35 (35%)	37 (37%)
	Moderate	91 (45.5%)	48 (48%)	43 (43%)
	Low	37 (18.5%)	17 (17%)	20 (20%)
Total		200	100	100

In Table2, more than half (56%) of the included autistic children aged less than 6 years, more than two-thirds (68.5%) were males and about one-third (34.5%) were the first child, 28% were the second child and 22.5% were the third child. Half of the included autistic children were diagnosed at age ≤ 24 months. More than half (56.5%) had duration since diagnosis 6-36 months. Other autistic children in the family were present in 17.5%.

Table (2): Distribution of sociodemographic data of autistic children among parents, fathers, and mothers

Sociodemographic variables		Both parents N = 200	Fathers N = 100	Mothers N = 100
Child age in years	**Less than 6 years**	112 (56%)	57 (57%)	55 (55%)
	6 years or older	88 (44%)	43 (43%)	45 (45%)
Child gender	**Male**	137 (68.5%)	70 (70%)	67 (67%)
	Female	63 (31.5%)	30 (30%)	33 (33%)
Autistic child order	**First child**	69 (34.5%)	35 (35%)	34 (34%)
	Second child	56 (28%)	28 (28%)	28 (28%)
	Third child	45 (22.5%)	22 (22%)	23 (23%)
	Fourth child	18 (9%)	9 (9%)	9 (9%)
	Fifth child	12 (6%)	6 (6%)	6 (6%)
Age of diagnosis of autism in months	**≤ 24 months**	101 (50.5%)	51 (10%)	50 (50%)
	> 24 months	99 (49.5%)	49 (49%)	50 (50%)
Duration since diagnosis in months No (%)	**6-36 months**	113 (56.5%)	58 (58%)	55 (55%)
	> 36 months	87 (43.5)	42 (42%)	45 (45%)
Other autistic child in the family	**Yes**	35 (17.5%)	17 (17%)	18 (18%)
	No	165 (82.5%)	83 (83%)	82 (82%)
Total		200	100	100

In Table 3, the mean score of the WHOQoL-BREF Physical domain in both parents was 44.52 ± 7.3, the Psychological domain was 39.92 ± 6.9, the Social domain was 53.17 ± 10.3, and the Environment domain was 34.11 ± 5.4.

Table (3): Mean scores of WHOQoL-BREF domains among both parents, fathers, and mothers

Domains	Both parents Mean ± SD (range)	Fathers Mean ± SD (range)	Mothers Mean ± SD (range)
Physical	44.52 ± 7.3 (21.43 – 64.29)	44.14 ± 8 (21.4 – 64.3)	44.89 ± 6.5 (28.57 – 60.7)
Psychological	39.92 ± 6.9 (21.67 – 58.33)	39.25 ± 7.2 (16.7 - 50)	40.58 ± 6.7 (29.17 – 58.3)
Social	53.17 ± 10.3 (33.3 - 75)	53.5 ± 10.7 (33.3 - 75)	52.83 ± 9.9 (33.3 - 75)
Environment	34.11 ± 5.4 (20.75 - 50)	33.59 ± 5.2 (18.75 – 43.75)	34.62 ± 5.6 (21.8 - 50)

In Table 4, the mean score of the total QoL of included fathers was 40.63 ± 3.3, while in mothers was 41.18 ± 4.1. Mean total QoL score was 40.91 ± 3.8, included parents.

Table (4): Mean total QoL score among both parents, fathers, and mothers

v	Total QoL Mean ± SD (range)
Both parents	40.91 ± 3.8 (20.19 – 50)
Fathers	40.63 ± 3.3 (31.73 – 48.08)
Mothers	41.18 ± 4.1 (20.19 - 50)

In Table 5, the total QoL distribution among fathers was poor (37%) and moderate (63%), while among mothers was poor (33%) and moderate (67%). The included parents had poor QoL (35%) and moderate QoL (65%).

Table (5): Total QoL distribution among parents, fathers, and mothers

	QoL (No. %)		
	Poor	**Moderate**	**Total**
Both parents	70 (35%)	130 (65%)	200
Fathers	37 (37%)	63 (63%)	100
Mothers	33 (33%)	67 (67%)	100

In Table 6, the answers for ‘How would you rate your quality of life?’ was very poor (14%), poor (34%), neither poor or good (46.5%), and good (5.5%). The answer for the ‘How satisfied are you with your health?’ was very dissatisfied (11.5%), fairly dissatisfied (25%), neither satisfied nor dissatisfied (38.5%), and satisfied (25%).

Table (6): Distribution of the general health awareness among participants

	General health awareness questions	Very poor	Poor	Neither poor nor good	Good	Very good
1	How would you rate your quality of life?	28 (14%)	68 (34%)	93 (46.5%)	11 (5.5%)	0 (0%)

		Very dissatisfied	Fairly Dissatisfied	Neither Satisfied nor dissatisfied	Satisfied	Very satisfied
2	How satisfied are you with your health?	23 (11.5%)	50 (25%)	77 (38.5%)	50 (25%)	0 (0%)

In Table 7, assessment of Total QoL in relation to Sociodemographic data of parents revealed no significant difference Neither for both parents Nor for fathers or mothers.

Table (7): Total QoL of parents, fathers, and mothers in relation to Sociodemographic data of parents

Sociodemographic variables		**Both parents QoL Mean ± SD**	**Fathers QoL Mean ± SD**	**Mothers QoL Mean ± SD**	**P-value**
Parent age in years	**20 – 30 years**	40.58 ±4.4	40.43±3.60	40.72±5.04	P1=0.275*[NS] P2=0.619*[NS] P3=0.268*[NS]
	More than 30 years	41.17 ±3.1	40.78±3.23	41.63±2.88	
Marital status	**Married**	40.95 ±3.7	40.75±3.28	41.15±4.15	P1=0.148+[NS] P2=0.109+[NS] P3=0.523+[NS]
	Divorced	38.62 ±4.1	37.98±5.12	39.90±.679	
	Widow	44.23 ±1.1	-	44.23±.000	
Number of children	**One - Two**	40.92 ±3.8	40.73±3.71	41.11±3.92	P1=0.522+[NS] P2=0.934+[NS] P3=0.238+[NS]
	Three - Four	40.73 ±3.7	40.59±3.09	40.88±4.35	
	More than four	41.96 ±3.5	40.63±3.38	43.68±2.93	
Socioeconomic	**High**	40.88	41.21±3.63	40.57±4.50	P1=0.992+[NS]

status		±4.1			P2=0.397+[NS] P3=0.509+[NS]
	Moderate	40.94 ±3.7	40.46±3.14	41.48±4.24	
	Low	40.88±3.8	39.93±3.52	41.18±2.795	

*Independent T test, + One way ANOVA test, P1: P-value of total parents, P2: P-value of fathers, P3: P-value of mothers.

In Table 8, the assessment of Total QoL in relation to Sociodemographic data of autistic children revealed no significant difference Neither for both parents Nor for fathers or mothers.

Table (8): Total QoL of both parents, fathers, and mothers in relation to sociodemographic data of autistic children

Sociodemographic variables		**Both parents QoL Mean ± SD**	**Fathers QoL Mean ± SD**	**Mothers QoL Mean ± SD**	**P-value**
Child age in years	**Less than 6 years**	40.92 ± 4.1	40.71±3.19	41.14± 4.85	P1=0.972*[NS] P2=0.811*[NS] P3=0.901*[NS]
	6 years or older	40.89 ± 3.3	40.54±3.65	41.24±2.97	
Child gender	**Male**	40.89 ± 3.8	40.66±3.54	41.13±4.096	P1=0.917*[NS] P2=0.912*[NS] P3=0.856*[NS]
	Female	40.95 ± 3.6	40.58±3.01	41.29±4.14	
Autistic child order	**First child**	40.75 ± 3.8	40.69±3.43	40.81±4.22	P1=0.739+[NS] P2=0.953+[NS] P3=0.186+[NS]
	Second child	40.99 ± 3.4	40.76±3.69	41.21±3.14	
	Third child	40.56 ± 4.4	40.82±3.35	40.30±5.32	
	Fourth child	41.39 ± 2.9	40.17±2.794	42.63±2.36	
	Fifth child	42.07 ± 3.7	39.74±3.31	44.39±2.46	
Age of diagnosis of autism in months	**≤ 24months**	40.77 ± 4.3	40.40±3.45	41.13±5.01	P1=0.587*[NS] P2=0.488*[NS] P3=0.907*[NS]
	> 24months	41.05 ± 3.1	40.88±3.32	41.23±2.94	
Duration since diagnosis months	**6-36months**	40.9 ± 4	40.91±3.198	40.89±4.77	P1=0.983*[NS] P2=0.322*[NS] P3=0.434*[NS]
	> 36months	40.92 ± 3.4	40.25±3.61	41.54±3.07	
Other autistic child in the family	**Yes**	40.41 ± 4.9	40.05±3.28	40.76±6.16	P1=0.390*[NS] P2=0.432*[NS] P3=0.629*[NS]
	No	41.01 ± 3.4	40.76±3.40	41.28±3.52	

*Independent T test, + One way ANOVA test P1: P-value of total parents, P2: P-value of fathers, P3: P-value of mothers

Association between WHOQOL-BREF domains and demographic data of included children and parents revealed a statistically significant association between child age, duration since diagnosis, parent age, marital status, and physical domain of WHOQOL-BREF. Child aged 6 years or older, with a duration since diagnosis > 36 months, parents age more than 30 years, and married parents were associated with better QoL (Table 9).

Table (9): Association between WHOQOL-BREF physical domain and sociodemographic data of included children and parents

		Physical domain			**Total No. 200**	**P-value**
		Poor	**Moderate**	**Good**		
Child age in years	**Less than 6 years**	36 (32.1%)	76 (67.9%)	0 (0%)	112	**0.019 [S]**
	6 years or older	27 (30.7%)	55 (62.5%)	6 (6.8%)	88	

Child gender	**Male**	37 (27%)	95 (69.3%)	5 (3.6%)	137	0.112 [NS]
	Female	26 (41.3%)	36 (57.1%)	1 (1.6%)	63	
Autistic child order	**First child**	23 (33.3%)	46 (66.7%)	0 (0%)	69	0.442 [NS]
	Second child	18 (32.2%)	34 (60.7%)	4 (7.1%)	56	
	Third child	14 (31.1%)	30 (66.7%)	1 (2.2%)	45	
	Fourth child	6 (33.3%)	11 (61.1%)	1 (5.6%)	18	
	Fifth child	2 (16.7%)	10 (83.3%)	0 (0%)	12	
Duration since diagnosis in months	**6-36 months**	37 (32.7%)	76 (67.3%)	0 (0%)	113	**0.018 [S]**
	> 36 months	26 (29.9%)	55 (63.2%)	6 (6.9%)	87	
Age of diagnosis of autism in months	**≤ 24 months**	35 (34.7%)	64 (63.3%)	2 (2%)	101	0.474 [NS]
	> 24 months	28 (28.3%)	67 (67.7%)	4 (4%)	99	
Parent age in years	**20 – 30 years**	32 (35.6%)	58 (64.4%)	0 (0%)	90	**0.049 [S]**
	More than 30 years	31 (28.2%)	73 (66.4%)	6 (5.5%)	110	
Other autistic child in the family	**Yes**	15 (42.9%)	20 (57.1%)	0 (0%)	35	0.177 [NS]
	No	48 (29.1%)	111 (67.3%)	6 (3.6%)	165	
Marital status	**Married**	56 (29.2%)	130 (67.7%)	6 (3.1%)	192	**0.008 [S]**
	Divorced	6 (100%)	0 (0%)	0 (0%)	6	
	Widow	1 (50%)	1 (50%)	0 (0%)	2	
Number of children	**One - Two**	27 (28.4%)	65 (68.4%)	3 (3.2%)	95	0.349 [NS]
	Three - Four	34 (37.4%)	55 (60.4%)	2 (2.2%)	91	
	More than four	2 (14.3%)	11 (78.6%)	1 (7.1%)	14	
Socioeconomic status	**High**	16 (22.2%)	52 (72.2%)	4 (5.6%)	72	0.103 [NS]
	Moderate	31 (34.1%)	59 (64.8%)	1 (1.1%)	91	
	Low	16 (43.2%)	20 (54.1%)	1 (2.7%)	37	

Using Chi-square test

There was a statistically significant association between duration since diagnosis and the psychological domain of WHOQOL-BREF. Duration since diagnosis > 36 months were associated with better QoL(Table 10).

Table (10): Association between WHOQOL-BREF psychological domain and sociodemographic data of included children and parents

Sociodemographic variables		**Psychological domain**		**Total No. 200**	**P-value**
		Poor no.90	**Moderate no.110**		
Child age in years	**Less than 6 years**	54 (48.2%)	58 (51.8%)	112	0.303

	6 years or older	36 (40.9%)	52 (59.1%)	88	[NS]
Child gender	**Male**	65 (47.4%)	72 (52.6%)	137	0.305 [NS]
	Female	25 (39.7%)	38 (60.3%)	63	
Autistic child order	**First child**	30 (43.5%)	39 (56.5%)	69	0.986 [NS]
	Second child	27 (48.2%)	29 (51.8%)	56	
	Third child	20 (44.4%)	25 (55.6%)	45	
	Fourth child	8 (44.4%)	10 (55.6%)	18	
	Fifth child	5 (41.7%)	7 (58.3%)	12	
Duration since diagnosis in months	**6-36 months**	58 (51.3%)	55 (48.7%)	113	**0.040 [S]**
	> 36 months	32 (36.8%)	55 (63.2%)	87	
Age of diagnosis of autism in months	**≤ 24 months**	47 (46.5%)	54 (53.5%)	101	0.659 [NS]
	> 24 months	43 (43.4%)	56 (56.6%)	99	
Parent age in years	**20 – 30 years**	46 (51.1%)	44 (48.9%)	90	0.116 [NS]
	More than 30 years	44 (40%)	66 (60%)	110	
Other autistic child in the family	**Yes**	18 (51.4%)	17 (48.6%)	35	0.400 [NS]
	No	72 (43.6%)	93 (56.4%)	165	
Marital status	**Married**	84 (43.8%)	108 (56.2%)	192	0.157 [NS]
	Divorced	5 (83.3%)	1 (16.7%)	6	
	Widow	1 (50%)	1 (50%)	2	
Number of children	**One - Two**	48 (50.5%)	47 (49.5%)	95	0.319 [NS]
	Three - Four	36 (39.6%)	55 (60.4%)	91	
	More than four	6 (42.9%)	8 (57.1%)	14	
Socioeconomic status	**High**	31 (43.1%)	41 (56.9%)	72	0.843 [NS]
	Moderate	43 (47.3%)	48 (52.7%)	91	
	Low	16 (43.2%)	21 (56.8%)	37	

Using Chi-square test

No statistically significant association was detected between the social and environmental domains of WHOQOL-BREF and the demographic data of included children and parents (Tables 11 and 12).

Table (11): Association between WHOQOL-BREF social domain and sociodemographic data of included children and parents

Sociodemographic variables		**Social Domain**			**Total No. 200**	**P-value**
		Poor no.13	**Moderate no.154**	**Good no.33**		
Child age in years	**Less than 6 years**	9 (8%)	83 (74.1%)	20 (17.9%)	112	0.476 [NS]
	6 years or older	4 (4.5%)	71 (80.7%)	13 (14.8%)	88	
Child gender	**Male**	10 (7.3%)	106 (77.4%)	21 (15.3%)	137	0.671 [NS]
	Female	3 (4.8%)	48 (76.2%)	12 (19%)	63	
Autistic child order	**First child**	5 (7.2%)	55 (79.7%)	9 (13%)	69	0.079 [NS]
	Second child	3 (5.3%)	44 (78.6%)	9 (16.1%)	56	
	Third child	1 (2.2%)	32 (71.1%)	12 (26.7%)	45	
	Fourth child	4	13	1 (5.6%)	18	

		(22.2%)	(72.2%)			
	Fifth child	0 (0%)	10 (83.3%)	2 (16.7%)	12	
Duration since diagnosis in months	**6-36 months**	9 (8%)	84 (74.3%)	20 (17.7%)	113	0.516 [NS]
	> 36 months	4 (4.6%)	70 (80.5%)	13 (14.9%)	87	
Age of diagnosis of autism in months	**≤ 24 months**	5 (5%)	75 (74.3%)	21 (20.7%)	101	0.199 [NS]
	> 24 months	8 (8.1%)	79 (79.8%)	12 (12.1%)	99	
Parent age in years	**20 – 30 years**	6 (6.7%)	67 (74.4%)	17 (18.9%)	90	0.701 [NS]
	More than 30 years	7 (6.4%)	87 (79.1%)	16 (14.5%)	110	
Other autistic child in the family	**Yes**	2 (5.7%)	29 (82.9%)	4 (11.4%)	35	0.641 [NS]
	No	11 (6.7%)	125 (75.8%)	29 (17.6%)	165	
Marital status	**Married**	11 (5.7%)	148 (77.1%)	33 (17.2%)	192	0.073 [NS]
	Divorced	2 (33.3%)	4 (66.7%)	0 (0%)	6	
	Widow	0 (0%)	2 (100%)	0 (0%)	2	
Number of children	**One - Two**	6 (6.3%)	74 (77.9%)	15 (15.8%)	95	0.834 [NS]
	Three - Four	7 (53.8%)	68 (74.7%)	16 (17.5%)	91	
	More than four	0 (0%)	12 (85.7%)	2 (14.3%)	14	
Socioeconomic status	**High**	5 (6.9%)	53 (73.6%)	14 (19.5%)	72	0.822 [NS]
	Moderate	6 (6.6%)	70 (76.9%)	15 (16.5%)	91	
	Low	2 (5.4%)	31 (83.8%)	4 (10.8%)	37	

Using Chi-square test

Table (12): Association between WHOQOL-BREF environment domain and sociodemographic data of included children and parents

Sociodemographic variables		**Environment domain**		**Total No. 200**	**P-value**
		Poor no.165	**Moderate no.35**		
Child age in years	**Less than 6 years**	95 (84.8%)	17 (15.2%)	112	0.330 [NS]
	6 years or older	70 (79.5%)	18 (20.5%)	88	
Child gender	**Male**	115 (83.9%)	22 (16.1%)	137	0.429 [NS]
	Female	50 (79.4%)	13 (20.6%)	63	
Autistic child order	**First child**	57 (82.6%)	12 (17.4%)	69	0.718 [NS]
	Second child	47 (83.9%)	9 (16.1%)	56	
	Third child	37 (82.2%)	8 (17.8%)	45	
	Fourth child	13 (72.2%)	5 (27.8%)	18	
	Fifth child	11 (91.7%)	1 (8.3%)	12	

Duration since diagnosis in months	**6-36 months**	95 (84.1%)	18 (15.9%)	113	0.505 [NS]
	> 36 months	70 (80.5%)	17 (19.5%)	87	
Age of diagnosis of autism in months	**≤ 24 months**	82 (81.2%)	19 (18.8%)	101	0.622 [NS]
	> 24 months	83 (83.8%)	16 (16.2%)	99	
Parent age in years	**20 – 30 years**	78 (86.7%)	12 (13.3%)	90	0.161 [NS]
	More than 30 years	87 (79.1%)	23 (20.9%)	110	
Other autistic child in the family	**Yes**	31 (88.6%)	4 (11.4%)	35	0.298 [NS]
	No	134 (81.2%)	31 (18.8%)	165	
Marital status	**Married**	158 (82.3%)	34 (17.7%)	192	0.254 [NS]
	Divorced	6 (100%)	0 (0%)	6	
	Widow	1 (50%)	1 (50%)	2	
Number of children	**One - Two**	80 (84.2%)	15 (15.8%)	95	0.377 [NS]
	Three - Four	72 (79.1%)	19 (20.9%)	91	
	More than four	13 (92.9%)	1 (7.1%)	14	
Socioeconomic status	**High**	57 (79.2%)	15 (20.8%)	72	0.599 [NS]
	Moderate	76 (83.5%)	15 (16.5%)	91	
	Low	32 (86.5%)	5 (13.5%)	37	

Using Chi-square test

Discussion

The present study comprised a sample of 200 parents (100 fathers and 100 mothers), with slightly more than half (55%) in the age group of over 30 years. A study carried out in Saudi Arabia reported that 74% of the included parents were above the age of 30 years [7].

The overwhelming majority (96%) of these parents were married, a figure that surpasses the 77% observed among parents in a study conducted by Alamri DA et al. (2020) [7] in Saudi Arabia. Conversely, Ahmed FA et al. (2023) [8] in Jordan and ALBusaidi AM et al. (2022) [9] in Oman reported findings that closely mirrored those observed in this study, with 80.1% and 95.4% of included parents, respectively, being married.

However, contrasting results were observed among parents with more than two children in Saudi Arabia [7], where only 8% of the included parents had more than two children. This disparity can be attributed to the reduced sample size in the Saudi study, the younger age of the participants in our study, and the potential reluctance of parents to have more children who might also be autistic.

In terms of socioeconomic status, 45.5% of parents in this study had moderate status, while 36% had high status. This finding is analogous to that of Volgyesi-Molmar et al. (2024) [10] in Hungary, where 48.5% of included parents had an average monthly income. In contrast, Erosy k et al. (2024) [11] in Turkey found that 40.6% of included parents had medium monthly income. This discrepancy can be attributed to the varying socioeconomic status across different countries.

In the present study, the order of the autistic child is mostly the first (34.5%). The association between order of birth and risk for autism is not yet clear, as most studies have shown that the greatest risk was in first-born children. A study was conducted in Malaysia among 456 children with ASD, of whom 54.8% were in the first order, and this decreased as order increased, reaching 2.8% in the fifth to eighth birth order [12]. The same data was reported in the United Kingdom by John JR et al., where 46.5% of autistic child was firstborn [13]. Some studies may be characterised by a relatively modest sample size or by an absence of analysis of the impact of family size on the observed associations. A further potential limitation is the confounding of outcomes with what is termed "reproductive stoppage," that is, the deliberate delay or failure of parents to conceive once a child has been diagnosed with ASD. It is noteworthy that families with a second or later-born child tend to be larger [14].

The diagnosis of autism was ≤ 24 months old in 50.5% of children of this age. A research conducted in Saudi Arabia [7], however, contradicted the findings of this study because all examined children were diagnosed to have an age>=24 months. All of the children in this study were below 3 years old, while in a systematic review and meta-analysis for the studies published between the years 2012 and 2019 to evaluate the current age for autism spectrum disorder diagnosis, were 56 studies having an age at diagnosis for 40 countries (containing 120,540 individuals with autism spectrum disorder); current mean age at diagnosis according to studying only children aged ⩽10 years equaled 60.48 months and 43.18 months. Numerous factors can influence the age of diagnosis, which has been discussed in 46 studies with many conflicting or inconclusive results, such as the type of diagnosis for autism spectrum disorders, additional diagnosis, and the effects of gender, among others [15].

There is another autistic child in the family in 17.5%, which was almost similar with a report in Saudi Arabia [7] as there was another autistic child in a family in 15%. It was reported in the United Kingdom [13] that 23.9% of parents included had other autistic child in the family. When one child has been diagnosed with ASD, the subsequent incoming child has about 20% more susceptibility of developing it than a child with neurotypical older siblings. And when the first two children get that diagnosis in a family, their chances go up to 32% [16].

Most parents experienced low QOL-related scores on the WHOQOL-BREF Environmental Domain. Therefore, parents of autism-afflicted children might feel anxious and worry about the child's physical security, community support, medical services, and resources available to this kind of population, and areas set aside for them, which vary from other countries' provisions. In one Iraqi study, both fathers and mothers reported moderate QOL. Mothers rated slightly lower emotional health, physical health, and environmental comfort compared to fathers. A study in the Netherlands, on the other hand, demonstrated somewhat divergent WHOQOL-BREF findings for fathers in the Physical domain (63.8 ± 8.9), Psychological domain (61.7 ± 8.8), Social domain (55.2 ± 11.9), Environment domain (63.1 ± 8.6). Similarly, for the mother’s Physical domain (56.9 ± 10.8), Psychological domain (58.9 ± 8.7), Social domain (57.3 ± 10.1), and Environment domain (61.9 ± 9.7). Potential cause: small sample size: 51 fathers, 56 mothers, and children aged 3-7 years, and merging culture.

A study done on QoL among the parents of ASD children in Saudi Arabia reported that both parents had an affected overall total QoL, with physical and psychology being the most affected ones. Whereas Alamri DR et al. demonstrated that the areas most affected was psychological and environmental domains.

As reported, in Oman, fathers and mothers scored similarly in physical health (65.14 ± 7.75 versus 62.40 ± 7.60), psychological (73.14 ± 10.98 versus 69.41 ± 11.16), social (74.20 ± 11.67 versus 72.63 ± 11.30), and environmental health domains (60.98 ± 10.33 versus 56.49 ± 11.10). Despite the lower scores in the latter across all four domains compared to their fathers, acceptable QOL were rated with respect to psychological (70.92 ± 11.22) and social (73.27 ± 11.46) health domains, borderline QOL in the physical health domain (63.51 ± 7.77), and poor QOL in the environmental health domain (58.31 ± 11.00). The sample with different contrasts can be attributed to coping strategies such as seeking social support and positive reappraisal.

This research showed that poor QoL among Egyptian children (64.3%) was found by Gabra et al. (2021) [17]. On the contrary, children in this study ranged from poor, 12.9%, to good, 22.9% compared to moderate, 64.3%. Fewer amounts of parents in this study, along with the younger age of children with autism, might make their QoL better, whereas better total QoL scores also reported in Oman [9]-(65 ± 8.2) could be due to better monthly income in included parents.

Majority Of parents in this study have self-perceived their QoL, and their satisfaction with their general life may be due to that Iraqi families have cooperation between them; the same result was found regarding QoL as neutral, but they were satisfied with their general life [7].

Total QoL assessment concerning the Sociodemographic data of parents did not indicate any significant difference. Jordan [8] similarly reported no significant relationship between total QoL and parents' ages and marital status. Total QoL was not reported as different from the number of children in another study in Saudi Arabia as well [7].

Assessment Regarding Overall QoL in Relation to Factors Sociodemographic Listing Addressee Autistic Child Did Not Show a Statistical Difference. Thus, supporting the study, there was also no significant association in Saudi Arabia [7] with total QoL concerning the gender of the autistic child as well as the presence of another autistic child. An Indian study also shows no association with the child's age and gender [18].

Similar findings regarding gender, income, occupation, and duration of illness were not statistically significant in the Saudi study. In the study done by Tung et al., it was found that there is no significant relationship ($p > 0.05$) between income and QOL.

Conclusion

A significant proportion of the parents in this study were over 30 years of age, with the majority of them being married. Furthermore, the data indicates that less than half of the parents had one or two children. With respect to socioeconomic status, less than half of parents had a moderate status, while one-third had a high status. The current study included more than half of the children less than six years of age and less than half of them six years or older. The included children were approximately two-thirds male.

Furthermore, the age at which diagnosis was made was ≤ 24 months in half of the children. The presence of other autistic children in the family was observed in a small proportion of the participants, with a mean total QoL score of 40.91 ± 3.8 recorded in the included parents. The included parents exhibited poor QoL in one-third of cases and moderate QoL in two-thirds of cases. While fathers and mothers exhibited nearly similar QoL, fathers demonstrated slightly higher levels of impairment compared to mothers.

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