



## Quality of Life of Mothers who have Intellectual Disabled Children in Ankara Turkey: A Survey Study

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### Keywords

Women, Quality of Life, Intellectual Disability, Social Work, Ankara.

### Abstract

The study aims to determine the quality of life and its associated factors among mothers' who have disabled children quality of life in Ankara Turkey. Methods: 22 special education and rehabilitation centers were included. According to the number of students in special education centers (totally 3117 children), used stratified sampling model of large, medium and small as divided. In total, 790 people respectively. 6 institutions did not allow to the study. Therefore, we interweaved totally 540 mothers by face to face interview. Study instruments included World Health Organization Quality of Life Questionnaire-Brief Version (WHOQOL-BREF-TR), questionnaire for Socio-demographic variables. T test, one-way analysis of variance (ANOVA) and in the multiple comparisons Bonferroni test was used. P-value <0.05 was considered statistically significant

Results: The mean (Standard deviation) for the physical domain was 13.1±2.2, 13.3±2.3 for the psychological domain, 13.6±2.9 for the social domain, and 13.0±2.3 for the environment domain, 12.9±2.1 environment TR domain. Factors significantly associated with quality of life included age, level of education and marriage, economic status, social support (all domains), future thinking, having more than one disabled child, time to allow herself, the most interested in whole day.

Conclusion: This study confirms that multiple factors are associated with quality of life among women who have disabled children. Age, educational status, marital status, economical status, social relationships were significantly associated with all the domains of quality of life. Among the four domains of quality of life, the social domain had the highest score while environmental TR domain had the lowest score.

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## 1. Introduction

In all societies, children are valuable individuals. They are considered to be the adults of future and raised and educated with care, and all their needs are fulfilled by making maximum use of all available resources. As soon as it is found out that the mother is pregnant, intensive preparations begin for this new member of the family. Although all societies have different customs, they all have something in common: strict attention paid to the mother so that she can give birth to a healthy child. The birth of the child will mark a new direction in the life of the family. Giving birth is usually seen as a positive event; however, arrival of a new member to a family is an important transition period that the couples should adapt to. This process may create changes in various fields of life including the expenses, the amount of time that the couples spend with each other, their regular sleep patterns, career development, etc. Besides, the birth of a child involves rearrangement of roles within the family and construction of new routines (Cricin et al. 1983; Chou and Palley 1998; Emerson 2003; Kazak and Marvin, 1984). As compared to the other families, the families of a child with a disability have extremely different and a wide range of problems in terms of their child's healthcare, self-care, education, adolescent development and problems, chance of having a job and occupation, psycho-social life within the family, social environment, and the life they experience after the loss of a parent, and depending on this, the needs and expectations of their children can be different (Turnbull and Turnbull 1995; Dönmez et al. 2000).

The day long task of caring and raising as well as the problems experienced by the mothers of children with intellectual disabilities sap their energy, making them live in natural isolation in a way detached from their environment, leaving no free time for them, and turning them into professionals permanently on duty in the house (Zucman 1982). These problems are also reinforced with the problem of being alone or other practical, physical, and social challenges experienced by the mother when she goes out with her disabled child (communal life places such as parks and playgrounds; adequacy of arrangements and services for the people with disabilities and the opportunities to use them; the services provided to these people by the society; the factors facilitating or impeding the life of the child and family) as well as other problems such as seeking a proper baby sitter or seeking a place to leave the child so that she can spend time for her private activities (Durukan et al. 2011; Tunç and Tekindal 2010a). It is known that such problems affect mothers' quality of life.

In the light of these, we can make a definition of the quality of life. Quality of life is defined by the World Health Organization as "individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns". Quality of life is a multi-dimensional concept. Among the factors that determine the quality of life are usually the physical and bodily well-being, personal development and satisfaction, relations with other people, recreation, social activities, communal activities, and citizenship activities (Dyson 1997). The concept of quality of life requires a systemic point of view. By adopting a multi-disciplinary approach, studies can be conducted on people's quality of life. The profession of social work

is also included since it is a profession with systemic and holistic viewpoint that basically aims to increase the quality of life. The most comprehensive task of the profession of social work is to minimize the difference between the expectations and experiences of an individual by using professional roles, knowledge, skills, and experiences.

Chronic diseases not only detracts children from the quality life, but also negatively affects the quality of life for parents. Quality of life for families with children with a chronic illness, and their mental status are thought to be affected by individual factors (genetic factors, parental and child personality, coping skills) and environmental factors (social support, socio-economic status) (Vitaliano et al. 2003; Raina et al. 2004). In one study, the quality of life of parents of children with pervasive developmental disorder (PDD) (in terms of physical activity, normal relations and the overall perception of the quality of life and health perception) was lower than parents of healthy children (Mugno et al. 2007).

From this point of view, if we are to specify the characteristics of the quality of life of mothers with children with disabilities, we can say that they need formal and informal social support systems (Hedov 2000); they are detached from life and excluded from the society and they live dependent on their home (Brown and Brown 2003); they are in need of material things and information and need to tell the situation of their child to other family members (Glozman 2004); they leave their job for their children (Turnbull and Turnbull 1995); they have a concern for the future and experience high levels of depression (Bailey 1988) ; and the state of mind affects the quality of life of these mothers. They need psychological support (Bumin et al. 2008) . They experience health problems (Tunç and Tekindal 2010b). Their socio-economic level is low, and the lower this socio-economic level is, the higher the rate of intellectual disability is (Vitello 1985) .

Furthermore, Leon- Salas et al. (2011) detected statistically significant relationships between lower QoL and persons per household (i.e. the household of PAD), income (i.e. the income of PAD or the income of caregiver), and the size of dwelling (i.e. the dwelling of PAD or the dwelling of caregiver) and between higher QoL and taking care of another dependent person (i.e. caregiver). According to Thomas et al. (2006), behavioral problems, depressive symptoms, functional capacity, and caregiver QoL are the determinants of QoL. Contrary to what is expected, correlations were detected between low income and high QoL and between taking care of another dependent person and high QoL. Previous studies have also included age, sex, educational status, marital status, duration of care, place of residence (i.e. rural versus urban), and other setting characteristics in research; however, they have found no strong relationship(Gonza´lez-Salvador et al. 2000; Lyketsos et al. 2003; Samus et al. 2005; Thomas et al. 2006; Missotten et al. 2008).

## **2. Purpose**

The purpose of this study ascertained an answer to these questions; 1) What is the mothers' who have disabled child quality of life in Turkey in Ankara, 2) Which one of the demographical characteristics affects the mothers' quality of life.

### 3. Methods

#### 3.1. Design, setting, and sampling

The study was conducted in 22 special education and rehabilitation centers in Yenimahalle where district of city is Ankara. The special education and rehabilitation centers are run by The Ministry of Education of Turkey. Usually women go to centers with disabled children.

#### 3.2. Sample size estimation and sampling technique

There are 22 special education and rehabilitation centers in Yenimahalle. Stratified simple random sampling was used to select participants. According to the number of students in special education centers (totally 3117 children), using stratified sampling model of large, medium and small as divided. In total, 790 people respectively (Table 1). 6 institutions did not allow to the study. Therefore, we reached totally 540 mothers. The surveys took 40 minutes on average to complete and interview face to face by researcher. Data were collected from December 1, 2010 to February 28, 2011.

**Table 1.** Weighted the number of people according to the layers of special education centers

Special Education Centers		N	W <sub>h</sub> (weighted of layers)	n <sub>h</sub> (number of people according to layers)
LARGE	TEBESSÜM S.E.C.	339	339/830=0.41	210*0.41=86
	İLK EMEK S.E.C.	248	248/830=0.30	210*0.30=63
	MOR MENEKŞE S.E.C.	243	243/830=0.29	210*0.29=61
	TOTAL	830		210
MEDIUM	AKADEMİK ADIM S.E.C.	145	145/1746=0.08	443*0.08=35
	BİZİM YONCA S.E.C.	164	164/1746=0.09	443*0.09=40
	ETKİN ÇOCUKLAR S.E.C.	138	138/1746=0.08	443*0.08=35
	GÖNÜL TURGUT S.E.C.	151	151/1746=0.09	443*0.09=40
	İLETİŞİM BAŞKENT S.E.C.	123	123/1746=0.07	443*0.07=31
	İNCİSER S.E.C.	143	143/1746=0.08	443*0.08=35
	KARDELEN S.E.C.	164	164/1746=0.10	443*0.10=44
	MAVİ YILDIZLAR S.E.C.	109	109/1746=0.06	443*0.06=27
	ÖZDECAN S.E.C.	145	145/1746=0.08	443*0.08=35
	PRENSES S.E.C.	102	102/1746=0.06	443*0.06=27
	RENKLİ YENİ UFUK S.E.C.	193	193/1746=0.11	443*0.11=50
	SEDAT TAŞ S.E.C.	169	169/1746=0.10	443*0.10=44
	TOTAL	1746		443
SMALL	ALDEM S.E.C.	77	77/541=0.14	137*0.14=19
	BÜYÜK GELİŞİM S.E.C.	72	72/541=0.13	137*0.13=18
	GÖREN KALPLER S.E.C..	75	75/541=0.14	137*0.14=19
	SİMAY S.E.C.	83	83/541=0.15	137*0.15=21
	ÜNLÜ ANKARA S.E.C.	80	80/541=0.15	137*0.15=21
	VARLI S.E.C.	72	72/541=0.13	137*0.13=18
	YENİBİR HAYAT S.E.C.	82	82/541=0.15	137*0.15=21
	TOTAL	541		137
GENERAL TOTAL		3117		790

S.E.C: Special Education Center

### 3.3. Study instruments

In this study, instruments are questionnaire and WHOQOL-BREF-TR. A structured close-ended questionnaire was used in this study. Questionnaire included mothers' demographical characteristics (age, education level, income level, marital status, job, number of children, health insurance, relations with her family, relatives, friends; things the most interested in whole day etc.). WHOQOL-BREF was developed by WHOQOL Group based on WHOQOL-100 and is an abbreviated version of WHOQOL-100 (WHOQOL Group 1998). As the WHOQOL-100 might be too long for some users (e.g. when there is a need to minimize the burden of the participants), the WHOQOL-BREF has been suggested as an alternative instrument for the measurement of QOL. Moreover, it is reported that when short measures are utilized, higher response rates are likely to be obtained (WHOQOL Group 1998). The WHOQOL-BREF contains 26 items; one item from each of the 24 facets contained in the original WHOQOL-100 and two items were retrieved from the 'Overall QOL and General health' facet. The WHOQOL-BREF covers four domains: *Physical health*, *Psychological health*, *Social relationships*, and *Environment* (WHOQOL Group 2004). The Turkish reliability and validity are reported to be good (Eser et al. 1999) and national question and national domain (environmental-TR) was added to the questionnaire. Totally Turkish version of WHOQOL-BREF has five domains (Physical health, Psychological health, Social relationships, Environment and Environment TR) (Fidaner et al. 1999). The response scales, all five-point Likert type ranging from 1 (not at all/ never/ very dissatisfied/ very poor) to 5 (extremely/ always/ very satisfied/ very good), higher scores indicate a better subjective QOL (WHOQOL Group 1998).

*Physical domain* contains variables such as capacity to work everyday activities, medication and treatment, energy and exhaustion, physical mobility, pain and discomfort, sleep and rest. *Psychological domain* includes variables such as positive emotions, thinking decision-making, self-esteem, body image, negative emotions, and variables such as personal spiritual beliefs. *Social domain* is an area that contains variables in the form of relationships with other people, social support, and sexual life. *Environmental domain* contains all of the variables involving the use of physical security, home environment, financial resources, and accessibility to health services, access to information, recreation, physical environment, and transportation facilities. Environmental-TR domain contains social oppression variable in the community. This domain has been added in Turkey by Eser and his friends (Eser et al. 1999; Fidaner et al. 1999).

WHOQOL-BREF was previously validated in multiple countries and languages (Nedjat et al. 2008; Rocha and Fleck 2009), and different patient groups, such as patients with HIV/AIDS (Sakthong et al. 2007), spinal cord injury (Hill et al. 2010), sickle cell disease (Asnani et al. 2009), postnatal women (Webster et al. 2010) and adult psychiatric outpatients (Trompenaars et al. 2005), parkinson's disease (Arun et al., 2011).

### 3.4. Ethical consideration

Republic of Turkey Ministry National Education approved this research in their research community. Permission was obtained from the administrators of each

woman. All participants were given detailed information about the study objectives and confidentiality of the information.

### 3.5. Data Analysis

For discrete and continuous variables, descriptive statistics (mean, standard deviation, median, minimum value, maximum value, and percentile) were given. In addition, the homogeneity of the variances, which is one of the prerequisites of parametric tests, was checked through Levene’s test. The assumption of normality was tested via the Shapiro-Wilk test. To compare the differences between the two groups, the Student’s t test was used when the parametric test prerequisites were fulfilled, and the Mann Whitney–U test was used when such prerequisites were not fulfilled. To compare the differences between three and more groups, one-way analysis of variance was used when the parametric test prerequisites were fulfilled, and the Kruskal Wallis test was used when such prerequisites were not fulfilled. The Bonferroni correction method, which is a multiple comparison test, was used to evaluate the significant results concerning three and more groups. Chi-square test was used for determining the relationships between two discrete variables. When the expected sources were less than 25%, values were determined through the Monte Carlo Simulation Method in order to include such sources in analysis. The data were evaluated via SPSS 20 (IBM Corp. Released 2011. IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp.).  $p < 0.05$  and  $p < 0.01$  were taken as significance levels.

## 4. Results

### 4.1. Characteristic of respondents

In this part of the study, first mothers’ demographical characteristics (Table 2) and the sub domains quality of life (Table 3) is mentioned.

**Table 2.** Characteristics of Mothers

Variable	N (540)	% (100)
<b>Age</b>		
14-15	36	6.7
16-21	62	11.5
22-30	127	23.5
31-45	240	44.4
45+	75	13.9
<b>Education level</b>		
None	44	8.1
Literate	54	10.0
Primary	230	42.6
High scholl	109	20.2
Bachelor	70	13.0
Master	33	6.1
<b>Marital status</b>		
Married	300	55.6
Single	151	28.0
Widowed	89	16.5

<b>Variable</b>	<b>N (540)</b>	<b>% (100)</b>
<b>Employment sector</b>		
Government	38	7.0
Prole	67	12.4
Self-employed	63	11.7
Private	55	10.2
Unemployed	66	12.2
Housewife	251	46.5
<b>Monthly income level (TL)</b>		
1-502	63	11.7
503-600	142	26.3
601-1000	118	21.9
1001-1500	98	18.1
1500+	89	16.5
yok	30	5.6
<b>Immigration status</b>		
Yes	257	47.6
No	283	52.4
<b>Health Insurance</b>		
EMEKLI SANDIGI	81	15.0
BAG-KUR	92	17.0
SSK	184	34.1
OZEL SANDIK	62	11.5
YESIL KART	71	13.1
None	50	9.3
<b>Number of children</b>		
1	81	15.0
2	200	37.0
3	123	22.8
4	99	18.3
5+	37	6.9
<b>Other Disabled Children</b>		
Yes	173	32.0
No	367	68.0
<b>Duration of learning disability (Year)</b>		
0-2	100	18.5
3-5	132	24.4
6-9	149	27.6
10-20	125	23.1
20+	34	6.3
<b>Health problem</b>		
Yes	269	49.8
No	271	50.2
<b>House status</b>		
Owner	170	31.5
Rental	273	50.6
Other	97	18.0

<b>Variable</b>	<b>N (540)</b>	<b>% (100)</b>
<b>House type</b>		
Slum	106	19.6
Apartment	256	47.4
Detached house	72	13.3
Villa	65	12.0
Other	41	7.6
<b>People who needed help from</b>		
Husband	192	35.6
Sister/brother	70	13.0
Mother	51	9.4
Father	42	7.8
Friends	52	9.6
Neighbor	65	12.0
Children	48	8.9
None of them	20	3.7
<b>Time to spend herself</b>		
Yes	240	44.4
No	300	55.6
<b>Things to do when spend to herself</b>		
Cleaning	117	21.7
Wathing tv	73	13.5
Reading book	57	10.6
Knitting	76	14.1
Going neighbor	50	9.3
Going relatives	36	6.7
Going shopping	42	7.8
Going coiffeur	37	6.9
Other	52	9.6
<b>Going outside with disabled chilren</b>		
Never	65	12.0
If necessary	149	27.6
Sometimes	180	33.3
Always	146	27.0
<b>Cause of disabling</b>		
Genetic	87	16.1
Prenatal	148	27.4
Moment of birth	168	31.1
Post-natal	137	25.4
<b>Relationship with relatives after disability</b>		
Meeting fewer	154	28.5
Changes not	295	54.6
Meeting more often	91	16.9
<b>Relationship with friends after disability</b>		
Meeting fewer	160	29.6
Changes not	301	55.7
Meeting more often	79	14.6
<b>Relationship with neighbors after disability</b>		
Meeting fewer	165	30.6
Changes not	293	54.3
Meeting more often	82	15.2



<b>Variable</b>	<b>N (540)</b>	<b>% (100)</b>
<b>Relationship with husband after disability</b>		
He away from me.	91	16.9
Changes not	295	54.6
Connect were stronger than between us.	154	28.5
<b>Relationship with healthy child after disability</b>		
Interested in fewer	115	21.3
Interested in all children	246	45.6
Interested in more than disabled child	103	19.1
I don't have healthy child	76	14.1
<b>The Most Interested in Whole Day</b>		
Cleaning	235	19.4
Cooking	203	16.8
Disabled child	322	26.6
Healthy child	151	12.5
Husband	152	12.6
Herself	148	12.2
Total	1211	100
<b>Effectiveness of special education and rehabilitation center</b>		
Yes	367	68.0
No	173	32.0
<b>Relationship among mothers in special education and rehabilitation center</b>		
Yes	365	67.6
No	175	32.4
<b>Needed services for high QOL</b>		
Health services	98	18.1
Education services	175	32.4
Economic services	115	21.3
Environmental services	92	17.0
Social services	60	11.1
<b>Future thinking with disabled child</b>		
Pessimistic	127	23.5
Not thinking the future	175	32.4
Optimistic	238	44.1
<b>Possible Authorities for solution</b>		
Governmental supports	186	34.4
Non governmental organizations support	120	22.2
Family support	151	28.0
Environmental support	83	15.4

The age of the study participants ranged from 14 to 45+. As shown in Table 2, of the 540 participants, majority of them 44.4 % were aged 31 to 45 years. Most of the mothers were married (55.6 %) and 44.5 % were single, 15 % of the mothers had 1 child, 75 % had 2 children or more. And also 32 % had 2 disabled children or more. Most of mothers had been learned disability for 6-9 years (27.6 %). The majocause of disabling was moment of birth (31.1%). Majority of the mothers had secondary education (20.2 %), while 18.1 % had primary or non educated. Most of mothers were housewife (46.5 %) and non-working, had social security (34.1 %) and their monthly income level were between 500-600 TL (26.3 %). Majority of mothers were migrated to Ankara (47.6 %) and have health insurance (90.7 %).

Majority of the mothers were living in apartment (50.6 %) and rental houses (47.4 %). Majority of mothers needed help from their husbands (35.6 %) and did not allow time to herself (55.6 %). Mothers 14.1 % were knitting when they spend the time to her. Majority of the mothers sometimes went to outside with disabled child (33.3 %). After learning the disability about their children, most of the mothers' relationships with their relatives (54.6 %), friends (55.7 %), neighbors (54.3 %) and husbands (54.6 %) were not change. Most of the mothers taking care of disabled child (59.6 %), cleaning (43.5 %), cooking (37.6 %), caring husband (28.1 %) and healthy children (28 %) respectively in a one day. Majority of the mothers were looking at the future hopefully (44.1 %) and most of the mothers thought that family support (28 %) was the first solution of problems.

**Table 3.** Mean Scores for QOL Domains

<b>DOMAINS OF QUALITY OF LIFE</b>	<b>N</b>	<b>Min.</b>	<b>Max.</b>	<b>Mean± St. deviation</b>	<b>Variance</b>
Physical	540	4.00	19.43	13.17±2.20	4822
Psychological	540	4.00	19.33	13.32±2.29	5260
Social	540	4.00	20.00	13.62±3.0	8975
Environment	540	5.00	20.00	13.05±2.38	5682
Environment TR (with national question)	540	5.78	18.22	12.91±2.12	4502

Table 3 shows the mean scores for the quality of life domains. The mean (Standard deviation) for the physical domain was 13.1±2.2, 13.3±2.3 for the psychological domain, 13.6±2.9 for the social domain, and 13.0±2.3 for the environment domain, 12.9 ±2.1 environment TR domain. As can be seen from the table, while the highest score is "social domain" in quality of life, the lowest average is in the "environmental- TR domain".

#### **4.2. Analysis**

In this part of the study, the comparisons of demographical characteristics with quality of life scores and Bonferroni Multiple Comparisons are given (Table 4).

**Table 4.** Comparisons of demographical characteristics with QOL scores (p values) and Multiple comparisons

		<b>n</b>	<b>Physical</b>	<b>Psychological</b>	<b>Social</b>	<b>Environment</b>	<b>Environment TR</b>	<b>Bonferroni</b>
Age	14-15 (a)	36	13.13±1.74	13.15±1.49	13.89±2.1	14±1.38	13.68±1.38	PH: d-e EN and EN(TR): a-b; a-e; b-c; b-d. b-e
	16-21 (b)	62	12.98±1.78	13.12±1.62	14.26±2.48	14.06±1.43	13.76±1.35	
	22-30 (c)	127	13.28±2.18	13.12±2.26	13.77±3.09	13.01±2.28	12.87±2.01	
	31-45 (d)	240	13.39±2.27	13.59±2.57	13.52±3.18	12.82±2.53	12.77±2.24	
	45+ (e)	75	12.46±2.37	13.04±2.14	13.03±2.93	12.53±2.75	12.36±2.45	
	p			0.028*	0.204	0.157	0.001**	
Education level	None (a)	44	12.61±2.22	12.67±1.99	13±2.89	12.28±2.9	12.22±2.52	EN and EN(TR): a-e; a-f; c-e; c-f
	Literate (b)	54	13.31±1.87	13.53±1.59	13.85±2.54	13.53±1.64	13.16±1.52	
	Primary ©	230	13.38±2.36	13.29±2.45	13.5±3.22	12.53±2.5	12.53±2.26	
	High school (d)	109	13.16±2.35	13.33±2.81	13.59±3.21	13.2±2.4	13.15±2.08	
	Bachelor (e)	70	12.99±1.79	13.63±1.77	14.08±2.48	13.94±1.72	13.54±1.65	
	Master (f)	33	12.62±1.54	13.31±1.34	14.06±2.34	14.45±1.53	13.99±1.56	
p			0.174	0.378	0.423	0.001**	0.001*	
Marital status	Married (a)	300	13.3±2.48	13.39±2.63	13.4±3.31	12.44±2.63	12.5±2.38	SO: a-b; EN and EN(TR): a-b; a-c
	Single (b)	151	12.9±1.83	13.36±1.77	14.18±2.47	13.9±1.61	13.51±1.48	
	Widowed ©	89	13.17±1.64	13±1.79	13.42±2.56	13.65±2	13.29±1.78	
p			0.189	0.365	0.025*	0.001**	0.001**	
Employment sector	Government (a)	38	13.16±2.68	13.81±2.56	13.82±3.12	14.16±2.39	13.94±2.19	EN and EN(TR): a-f; b-f; c-f; e-f;
	Prole (b)	67	13.08±1.38	13.29±1.74	14.09±2.71	13.86±1.69	13.49±1.48	
	Self-employed (c)	63	12.61±1.46	13.54±1.51	13.54±2.37	13.77±1.77	13.34±1.67	
	Private (d)	55	13.16±1.93	13.14±1.68	13.92±2.2	14.04±1.18	13.64±1.16	
	Unemployed (e)	66	13.43±1.75	13.67±1.56	14.12±2.32	13.68±1.59	13.35±1.44	
	Housewife (f)	251	13.27±2.57	13.14±2.76	13.29±3.44	12.1±2.68	12.22±2.44	
p			0.345	0.337	0.194	0.001**	0.001**	
Monthly income level (TL)	1-502 (a)	63	12.75±2.7	12.73±2.44	12.49±2.91	11.84±2.73	11.79±2.4	SO: a-b; EN and EN(TR): a-c; a-d; a-e; a-f; b-e; b-f
	503-600 (b)	142	13.46±2.21	13.35±2.39	13.9±3	12.62±2.47	12.63±2.25	
	601-1000 ©	118	13.16±2.26	13.32±2.27	13.82±3.12	12.98±2.15	12.93±1.95	
	1001-1500 (d)	98	12.94±1.89	13.39±2.26	13.43±2.98	13.43±2.35	13.15±2.07	
	1500+ (e)	89	13.27±2.12	13.55±2.25	13.69±2.9	13.86±2.09	13.59±1.82	
	yok (f)	30	13.14±1.78	13.47±1.79	14.31±2.52	14.2±1.26	13.76±1.24	
p			0.309	0.38	0.025*	0.001**	0.001**	

Immigration status	Yes	257	13.2±2.28	13.25±2.24	13.48±2.91	12.98±2.53	12.84±2.24	§
	No	283	13.14±2.12	13.38±2.34	13.74±3.07	13.1±2.25	12.97±2.01	
	p		0.762	0.539	0.314	0.556	0.481	
Health Insurance	EMEKLI SANDIGI (a)	81	13.21±2.58	13.47±2.81	13.27±3.24	13.06±2.76	12.98±2.47	SO: c-f; d-f; EN and EN(TR): b-f; c-d; d-f;
	BAG-KUR(b)	92	13.04±2.09	13.19±2.08	13.8±2.73	13.47±1.89	13.19±1.67	
	SSK (c)	184	13.39±2.28	13.51±2.54	13.8±3.11	12.73±2.56	12.74±2.3	
	OZEL SANDIK (d)	63	12.72±1.65	13.69±1.44	14.06±2.02	14.1±1.31	13.66±1.26	
	YESIL KART (e)	71	13.16±2.07	13±1.76	13.86±3.09	13.08±2.06	12.96±1.82	
	None (f)	50	13.1±2.16	12.6±2.16	12.32±3.25	12.04±2.75	11.92±2.42	
p		0.44	0.082	0.02*	0.001**	0.001**		
Number of children	1 (a)	81	13.5±2.61	13.18±2.7	13.6±2.87	13.01±2.39	12.94±2.12	***
	2 (b)	200	13.27±2.13	13.59±2.31	13.71±3.11	13.15±2.43	13.04±2.18	
	3 (c)	123	13.01±2.05	13.15±2.31	13.5±3.08	12.75±2.34	12.63±2.07	
	4 (d)	99	13.14±2.15	13.33±1.83	13.6±2.86	13.2±2.17	12.97±1.94	
	5+ (e)	37	12.48±2.08	12.68±2.22	13.66±2.85	13.18±2.82	12.95±2.44	
	p	540	0.159	0.162	0.983	0.589	0.543	
Other Disabled Children	Yes	173	12.87±1.81	13.19±1.73	13.66±2.57	13.6±1.78	13.25±1.56	§
	No	367	13.31±2.34	13.38±2.52	13.6±3.18	12.79±2.58	12.75±2.32	
	p	540	0.031	0.362	0.843	0.001**	0.010**	
Duration of learning disability (Year)	0-2 (a)	100	13.46±2.36	13.57±2.58	14.28±3.07	13.06±2.46	13±2.19	SO: a-b. a-c. a-d
	3-5 (b)	132	13.13±2.19	13.37±2.24	13.54±2.94	13.14±2.59	13.03±2.28	
	6-9 (c)	149	13.18±2.19	13.1±2.28	13.25±3.17	12.94±2.48	12.76±2.16	
	10-20 (d)	125	12.92±2.05	13.1±2.16	13.33±2.74	13.05±2.14	12.88±1.94	
	20+ (e)	34	13.33±2.28	14.14±1.95	14.67±2.67	13.09±1.8	12.94±1.8	
	p		0.478	0.088	0.014*	0.972	0.852	
Health problem	Yes	269	12.63±2.17	12.88±2.34	13.15±3.01	12.65±2.41	12.58±2.16	§
	No	271	13.71±2.09	13.76±2.17	14.08±2.92	13.44±2.3	13.24±2.03	
	p		0.001**	0.001**	0.001**	0.001**	0.001**	
House status	Owner (a)	170	13.29±2.39	13.29±2.46	13.6±3.01	13.02±2.42	12.97±2.22	***
	Rental (b)	273	13.17±2.22	13.34±2.35	13.7±3.02	12.92±2.42	12.79±2.11	
	Other (c)	97	12.95±1.72	13.3±1.79	13.43±2.91	13.44±2.2	13.15±1.98	
	p		0.473	0.97	0.744	0.186	0.311	
House type	Slum (a)	106	13.01±2.34	13.04±2.47	13.42±3.23	11.92±2.74	11.95±2.46	EN: a-b. a-c. a-d. a-e EN (TR): a-b. a-c. a-d. a-e. b-c. b-d. b-e
	Apartment (b)	256	13.3±2.43	13.38±2.64	13.4±3.3	13.02±2.48	12.93±2.2	
	Detached house (c)	72	13.55±1.72	13.41±1.5	14.2±2.32	13.72±1.59	13.43±1.43	
	Villa (d)	65	12.76±1.77	13.44±1.63	14.01±2.31	13.93±1.67	13.59±1.49	
	Other (e)	41	12.74±1.35	13.32±1.37	13.85±2.19	13.52±1.79	13.29±1.68	
	p		0.116	0.722	0.205	0.001**	0.001**	

People who needed help from	Husband (a)	192	13.54±2.53	13.72±2.69	13.89±3.44	12.33±2.72	12.44±2.46	PS: a-h; EN: a-c; a-d; a-e; a-f; a-g EN(TR): a-e
	Sister/brother (b)	70	12.69±2.07	12.97±2.2	13.3±2.99	12.99±2.23	12.9±2.04	
	Mother (c)	51	13.09±1.67	13.14±1.92	13.73±2.34	13.55±2.12	13.18±1.9	
	Father (d)	42	13.37±1.62	13.22±1.37	14.13±2.17	13.88±1.24	13.53±1.19	
	Friends (e)	52	13.29±2.09	13.49±1.79	13.95±2.66	13.75±2.03	13.51±1.84	
	Neighbor (f)	65	12.8±1.96	13.1±2.19	13.03±2.42	13.43±2.26	13.16±2.04	
	Children (g)	48	12.95±1.88	13.22±1.51	13.61±2.62	13.7±1.55	13.3±1.37	
	None of them (h)	20	12.46±2.61	11.9±3.16	11.93±4.05	12.45±2.99	12.18±2.48	
p		0.055	0.021*	0.067	0.001**	0.002*		
Time to spend herself	Yes	240	13.4±2.17	13.74±2.13	13.81±2.83	13.6±2.08	13.4±1.87	§
	No	300	12.98±2.2	12.98±2.37	13.47±3.12	12.6±2.52	12.52±2.23	
	p		0.03*	0.001**	0.314	0.001**	0.001**	
Things to do when spend to herself	Cleaning (a)	117	13.08±2.54	12.88±2.72	13.03±3.45	11.71±2.55	11.89±2.32	EN and EN (TR): a-b. a-c. a-d. a-e. a-g. a-h
	Watching TV (b)	73	13.32±2.31	13.68±2.26	14.19±2.88	13.34±2.25	13.14±2.12	
	Reading book (c)	57	12.78±1.52	13.3±2.15	13.47±2.5	13.4±2.13	13.19±1.95	
	Knitting (d)	76	13.76±2.6	13.64±2.4	13.95±3.32	13.16±2.44	13.01±2.17	
	Going neighbor (e)	50	13.62±1.78	13.78±1.82	13.95±2	13.71±1.5	13.39±1.37	
	Going relatives (f)	36	12.97±1.71	13.31±1.89	14.04±3.02	12.93±1.92	12.79±1.66	
	Going shopping (g)	42	13.1±1.8	13.16±2.22	13.59±2.7	13.89±2.19	13.44±1.96	
	Going coiffeur (h)	37	12.88±1.37	13.32±1.68	13.37±2.52	13.73±1.71	13.49±1.54	
	Other (i)	52	12.66±2.45	13.04±2.29	13.44±2.99	13.35±2.38	13.25±2.12	
p		0.088	0.221	0.261	0.001**	0.001**		
Going outside with disabled children	Never (a)	65	12.97±2.14	13.06±2.08	13.23±3.11	13.37±2.13	13.05±1.84	PH: a-d. b-d. c-d PS: b-d SO: b-d
	If necessary (b)	149	12.57±2.19	12.86±2.15	13.21±2.86	12.86±2.57	12.72±2.27	
	Sometimes (c)	180	13.07±1.99	13.31±2.34	13.5±2.87	12.86±2.24	12.72±2	
	Always (d)	146	13.99±2.24	13.92±2.35	14.37±3.13	13.33±2.45	13.28±2.2	
p		0.001**	0.001**	0.004**	0.155	0.062		
Cause of disabling	Genetic (a)	87	13.34±2.12	13.49±2.29	13.67±3.51	13.05±2.76	12.96±2.35	EN and EN (TR): a-d. b-d. c-d
	Prenatal (b)	148	13.13±1.92	13.46±2.05	13.86±2.49	13.33±2.2	13.13±1.96	
	Moment of birth (c)	168	13.3±2.22	13.29±2.26	13.74±2.67	13.28±2.26	13.1±2.07	
	Post-natal (d)	137	12.94±2.48	13.09±2.58	13.19±3.48	12.46±2.39	12.42±2.16	
p		0.446	0.47	0.255	0.007**	0.015*		
Relationship with relatives after disability	Meeting fewer (a)	154	12.67±2.17	12.87±2.4	13.01±3.05	12.44±2.63	12.37±2.33	PH. PS and SO: a-b EN and EN (TR): a-b; a-c
	Changes not (b)	295	13.46±2.29	13.52±2.37	13.84±3.09	13.11±2.39	12.99±2.12	
	Meeting more often (c)	91	13.08±1.75	13.42±1.69	13.95±2.4	13.85±1.53	13.59±1.45	
p		0.001**	0.015*	0.011*	0.001**	0.001**		

Relationship with friends after disability	Meeting fewer (a)	160	12.53±2.12	12.8±2.43	12.6±3.04	12.34±2.65	12.26±2.42	PH:a-b; b-c SO:a-b; a-c; c-b EN(TR): a-b; a-c
	Changes not (b)	301	13.59±2.25	13.56±2.32	14.13±2.98	13.26±2.33	13.12±2.03	
	Meeting more often (c)	79	12.87±1.75	13.43±1.69	13.74±2.41	13.66±1.56	13.42±1.45	
	p		0.001**	0.003*	0.001**	0.001**	0.001**	
Relationship with neighbors after disability	Meeting fewer (a)	165	12.66±2.04	12.91±2.31	12.79±2.95	12.48±2.63	12.37±2.32	PH. PS and SO: a-b EN and EN(TR): a-b; a-c. c-b
	Changes not (b)	293	13.49±2.31	13.56±2.41	14.05±3.07	13.2±2.39	13.11±2.13	
	Meeting more often (c)	82	13.02±1.89	13.28±1.64	13.74±2.45	13.63±1.46	13.32±1.35	
	p		0.001**	0.016*	0.001**	0.001**	0.001**	
Relationship with husband after disability	He away from me (a)	91	12.82±2.11	13.21±2.22	13.41±3.02	13.16±2.45	12.86±2.16	***
	Changes not (b)	295	13.28±2.25	13.24±2.43	13.48±3.07	13.03±2.39	12.95±2.15	
	Connect were stronger than between us. (c)	154	13.17±2.14	13.53±2.06	14.02±2.82	13±2.35	12.87±2.06	
	p		0.215	0.403	0.147	0.867	0.898	
Relationship with healthy child after disability	Interested in fewer (a)	115	13.23±2.17	13.02±2.34	13.34±3.16	12.4±2.5	12.39±2.26	***
	Interested in all children (b)	246	13.19±2.3	13.52±2.48	13.9±3.23	12.92±2.63	12.84±2.34	
	Interested in more than disabled child (c)	103	12.91±1.81	13.19±1.61	13.48±2.38	13.86±1.48	13.49±1.33	
	I don't have health child (d)	76	13.36±2.39	13.27±2.36	13.32±2.68	13.31±2	13.16±1.84	
	p		0.225	0.08	0.478	0.114	0.457	
Effectiveness of special education and rehabilitation center	Yes	367	13.37±2.37	13.38±2.47	13.51±3.14	12.69±2.52	12.64±2.25	§
	No	173	12.74±1.71	13.18±1.87	13.85±2.66	13.8±1.85	13.49±1.68	
	p		0.002	0.348	0.221	0.001**	0.001**	
Relationship among mothers in special education and rehabilitation center	Yes	365	13.25±2.26	13.21±2.4	13.62±3.1	12.8±2.51	12.72±2.21	§
	No	175	12.99±2.05	13.55±2.03	13.62±2.79	13.57±2.01	13.31±1.86	
	p		0.184	0.109	0.98	0.001**	0.002	
Needed services for high QOL	Health services (a)	98	13.39±2.01	13.19±2.18	13.18±3.17	12.24±2.35	12.29±2.19	EN and EN(TR):a-b; a-c; a-d;
	Education services (b)	175	13.17±2.32	13.41±2.63	13.94±3.12	13.29±2.53	13.15±2.24	
	Economic services (c)	115	13.02±2.24	13.19±2.12	13.37±2.87	13.17±2.41	13±2.14	
	Environmental services (d)	92	13.27±2.12	13.66±1.87	14±2.76	13.47±1.93	13.21±1.68	
	Social services (e)	60	12.93±2.16	12.97±2.3	13.31±2.84	12.78±2.33	12.62±2.08	
	p		0.663	0.362	0.138	0.002*	0.007*	

Future thinking with disables child	Pessimistic (a)	127	12.69±2.07	13.1±2.26	13.17±3.13	12.55±2.46	12.44±2.17	PH: a-c; c-b PS: a-c; b-c EN and EN(TR): a-c
	Not thinking the future (b)	175	12.76±1.96	12.85±2.18	13.59±2.88	13.06±2.23	12.88±2	
	Optimistic (c)	238	13.72±2.3	13.78±2.32	13.88±2.99	13.3±2.42	13.19±2.14	
	p		0.001**	0.001**	0.092	0.016*	0.006*	
Possible Authorities for solution	Governmental supports (a)	186	13.15±2.36	13.22±2.48	13.13±3.23	12.26±2.71	12.32±2.48	SO: a-c EN and EN(TR): a-b; a-c; a-d
	Non-governmental organizations support (b)	120	13.11±1.82	13.16±1.92	13.82±2.56	13.57±2.05	13.24±1.81	
	Family support (c)	151	13.23±2.22	13.58±2.29	14.26±3.04	13.5±2.18	13.3±1.91	
	Environmental support (d)	83	13.17±2.29	13.29±2.37	13.27±2.75	13.23±1.95	13.05±1.77	
	p		0.977	0.413	0.003*	0.001**	0.001**	

PH: Physical Domain, PS: Psychological, SO: Social, EN: Environment, EN (TR): Environment Turkey

§there is no need to test multiple comparisons of the two-group

\* The test was significant  $p < 0,05$

\*\* The test was significant  $p < 0,001$

\*\*\* The test was insignificant for all QOL domains

As can be seen at Table 4 living with two more disabled children physical domain ( $p = 0.031$ ), environment domain ( $p = 0,001$ ) and environment TR domain ( $p = 0.10$ ). Time to allow herself was significantly associated with the physical domain ( $p = 0.031$ ), psychological domain ( $p = 0,001$ ), environment domain ( $p = 0,001$ ) and environment TR domain ( $p = 0,001$ ). In a whole day; making meal was significantly associated with the physical domain ( $p = 0.049$ ), caring healthy child was significantly associated with environment domain ( $p = 0,001$ ) and environment TR domain ( $p = 0,001$ ). Caring husband was significantly associated with the social domain ( $p = 0.015$ ), environment domain ( $p = 0,001$ ) and environment TR domain ( $p = 0,001$ ). Interested in herself was significantly associated with environment domain ( $p = 0,001$ ) and environment TR domain ( $p = 0,001$ ).

Table 4 shows that among the socio-demographic variables, relationships with friends, neighbors, relatives and also future thinking were significantly associated with all domains of QOL ( $p < 0.05$ ). Age was significantly associated with the physical domain ( $p = 0.028$ ), environment domain ( $p = 0,001$ ) and environment TR domain ( $p = 0,001$ ). Level of education was significantly associated with the environment domain ( $p = 0,001$ ) and environment TR domain ( $p = 0,001$ ). Marital status was significantly associated with the social domain ( $p = 0.025$ ), environmental domain ( $p = 0,001$ ) and environmental TR domain ( $p = 0,001$ ). Work status was significantly associated with the environment domain ( $p = 0,001$ ) and environment TR domain ( $p = 0,001$ ). Monthly Income level was significantly associated with the social domain ( $p = 0.025$ ), environmental domain ( $p = 0,001$ ) and environmental TR domain ( $p = 0,001$ ). Health Insurance was significantly associated with the social domain ( $p = 0.020$ ), environmental domain ( $p = 0,001$ ) and environmental TR domain ( $p = 0,001$ ). Cleaning the house, caring disabled children, number of children and relationship with husband were not significantly associated with any domain of quality of life.

#### QOL and associated variables

In the view of subscales of QOL domains, uneducated women had lower quality of life in environment and environment TR domains than educated women ( $p < 0,05$ ). Married women had lower quality of life in social, environment and environment TR domains than single women ( $p < 0,05$ ). In employment sector, housewife women had the lowest quality of life in environment and environment TR domains among employed women ( $p < 0,05$ ). Women who had 1-502 TL monthly, had lower quality of life in social, environment and environment TR domains than women had 503-600 TL ( $p < 0,05$ ). Women who had any health insurance, had lowest quality of life in social, environment and environment TR domains among women who had SSK and Özel Sandık ( $p < 0,05$ ). Women who one disabled child had lower quality of life in environment and environment TR domains than who had two or more disabled children ( $p < 0,05$ ). Women, who know the disability for 0-2 years, had better quality of life in social domain than women who knows 3-20 years ( $p < 0,05$ ). Unhealthy women had lower quality of life in all areas than healthy women. Women who live in slums, had lowest quality of life in environment and environment TR domains than who live in apartment, detached house, villa and other type of houses ( $p < 0,05$ ). Women who need help any people had lower



quality of life in psychological domain than who need help from husband ( $p<0,05$ ). Additionally, women who need help from husband, had lower quality of life in environment domain than who need help from mother, father, friends, neighbor and children ( $p<0,05$ ). Women who could not find any time for herself, had lower quality of life in physical, psychological, environment and environment TR domains than who could spend time for herself ( $p<0,05$ ). Women who had cleaning, had lowest quality of life in environment and environment TR domains among all other sub variables ( $p<0,05$ ). Women who always go outside with disabled children had better quality of life in physical domain than all other sub variables. Women who always go outside with disabled child had better quality of life in physical, psychological and social domains than who goes out if necessary ( $p<0,05$ ). Women whose child's cause of disabling post-natal factor, had lowest quality of life in environment and environment TR domains among all other causes ( $p<0,05$ ). Women who meet fewer with relatives, friends and neighbors after disability had the lower quality of life in all areas than who had any change ( $p<0,05$ ). Women who needed health services, had lower quality of life in environment and environment TR domains than other services ( $p<0,05$ ). Pessimistic women had lower quality of life in physical, psychological, environment and environment TR domains than optimistic women ( $p<0,05$ ). Women, who found governmental supports are important, had lower quality of life in social, environment and environment TR domains than women who found family support important ( $p<0,05$ ).

## 5. Discussion

The results also show that, however, half of the married mothers of children with mental disabilities in Ankara, live with their husbands, do not work, are housewives, have traditional family structure, and therefore, they have to depend on their spouses, especially financially. The social domain of quality of life had the highest mean score  $13.6\pm 2.9$  in this study, while the environment TR domain had the lowest mean score  $12.9\pm 2.1$ . In general, mothers of children with mental disability at an average level of quality of life. Women who have disabled children had lower quality of life than who had not (Aras et al. 2014; Hoefman et al. 2014).

As a result, mothers who have disabled children suffer from social oppression (national-item environment TR) in Ankara. Also, due to social domain, they establish better relations with other people and have more social support (Meral and Cavkaytar 2014). Researches reveal that social support determines the level of quality of life (Lunsk and Benson 2001; Caron et al. 1997; Pittman and Lloyd 1988; Md-Sidin et al. 2010; Mannan et al. 2006). For mothers who have disabled children the relatives, friends and neighbors play important role for social support. Because when mothers got face of disability, quality of life of them began to decrease in every area. This means that, the phenomenon of social exclusion experienced particularly by the closer environment, reduces the quality of life of mothers. If the mothers are supported primarily by their close relatives, their quality of life will be increase. Also "self-taking time" plays an important role in improving the quality of life for mothers. Parallel with that Cankurtaran Öntaş and Tunç Tekindal (2015) stated that women who have disabled children sacrifice themselves for everybody.

Marital status was significantly associated with the social, environment and environmental TR. Also married mothers have lower quality of life score in the social area than widowed mothers.

Level of education was significantly associated with environment and environment TR domains of quality of life. For social work profession directing them to literacy courses, vocational courses, outdoor education programs will help mothers of children with mental disability to gain self-confidence and make them capable to support their family financially by means of professional improvement, as a result of which help their quality of life improve. There is significant association between economic status and higher quality of life scores.

The fact that in Ankara, mothers of children with mental disability have positive or negative thoughts about especially the future of their disabled children affects mothers' quality of life in physical, psychological, environmental, and environmental TR. Mothers who are pessimistic about the future have lower quality of life in all these areas. On the contrary, mothers with optimistic view about the future of their children have much higher quality of life in these areas. Here, in order to ensure mothers 'positive' thinking, with a multidisciplinary approach and psychologists in the special education rehabilitation centers where mothers can be easily contacted, social workers work together with the mothers in the institution and then cooperate with the other mothers. In addition, the effectiveness of family counseling centers should be increased.

At this point, it is clear that social workers are one of the major professional groups that have a great impact on the quality of life of mothers. Because social workers have a an important mission with systematic and a holistic perspective, from the individual to the community, involving that mothers should unite first with themselves, their families and community, and that they reduce the pressure. These efforts can be realized especially when mothers manage self-actualization by gaining economic power, becoming more sociable, self-confident, and when they have support from their relatives, friends and neighbors.

## **6. Conclusion**

The findings of this study indicate that women who have disabled children had worse quality of life scores in environment TR and the best in social domain. Age, education level, marital status, employment sector, monthly income level, health insurance, other disabled children, health problem, house status and type, people who needed help, time to spend herself, things to do, going outside, cause of disabling, social support systems, future thinking, and possible authorities for solution were significantly associated with at least one domain of quality of life. These findings shows that social workers could be play important role for increasing the quality of life of mothers who have disabled children.

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