

Examination of psychological strength and depression levels of mothers with and without hearing-impaired children

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Abstract

Socio-demographic variables of mothers of children born with hearing impairment and between the ages of 1-5 and mothers of children with normal development, and psychological well-being. This study aims to examine whether there is a significant difference between the levels of depression and depression. This study was carried out in Diyarbakir, among mothers who have children aged 1-5 with hearing impairment and children aged 1-5 with normal development. One hundred and two (102) mothers of 51 hearing-impaired and 51 non-disabled children participated in the study. Demographic information forms created by the researchers for the participants, and Beck's Depression Inventory adapted by Hisli were used to collect data. Results showed that the depression level of mothers with a child with a hearing impairment is significantly higher than that of mothers with a child with a normally developing child.

Keywords: Depression; hearing impaired; psychological resilience; psychological strength.

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1. Introduction

Hearing loss is the fourth highest cause of disability worldwide (WHO, 2004). The prevalence of hearing loss was calculated at 4 % using the international classification of disease (ICD - 10) (WHO, 2018). Available data suggest that approximately 5 % of the world's population is above the 40-dB sound hearing threshold dB of 32 million adults and 34 million children and adolescents. In the United States, two or three out of every 1,000 children are born with permanent hearing loss (Centers for Disease Control and Prevention, 2018). Despite this picture, it is assumed that hearing loss cases in children can be prevented in early childhood. In particular, early detection is necessary to minimize the impact of hearing loss on a child's development (including social isolation, psychological problems, and educational achievements). The use of hearing aids, cochlear implants, and other assistive devices should be encouraged (WHO, 2018).

Parents are at the center of the audiological preventive and intervention processes and are effective in supporting language development. However, parents may experience difficulties that may change over time, including intervention tasks (for example, hearing aid care and use) for a variety of reasons (Lederberg and Golbach, 2002). Most parents of children who are deaf or hard of hearing are poorly prepared when their child is diagnosed with hearing loss (Mitchell and Karchmer, 2004). For this reason, the diagnosis can often lead to a crisis in the lives of the parents. The psychological response typically includes feelings of grief, helplessness, guilt, and anger (Nancy & Mellon, 2009). Considering the central role of hearing in human communication, a sense of isolation is inevitable within the parent-child dynamic. This happens because parents do not have enough information about the hearing impaired. With the crisis they are experiencing, parents may miss the treatment and education processes that may be necessary. In addition, over-involved and protective kg are started to be given to the child per month, but from the child's point of view, the dependence on the parents does not increase. It causes the disease (Vash and Crewe, 2004).

When the child becomes dependent on the family, the options in the life of the mother who gives primary care, especially the mother, can become dark due to excessive protectionism towards her child. It is being tried because disability causes the mother to make an active effort to overcome difficulties (Duygun & Sezgin, 2003). With these efforts, there is a decrease in allocating time for oneself, participating in social activities, and time devoted to social life (Bright, Hayward, & Clement, 1997).

In previous studies, it was determined that mothers with disabled children experience symptoms of depression, stress, and the inability to adapt to difficult conditions as a psychological reaction (Tura, 2017). Depression affects an estimated 3.8% of the population, 5.0 % of adults, and 5.7 % of adults over 60 years of age worldwide and is a serious mental disorder (GHDX, 2019). Approximately 280 million people in the world have depressive symptoms (GHDX, 2019). It is known that depression has negative effects on how a person feels, thinks, and behaves. There is reluctance, loss of pleasure, pessimism, self-blame, and hopelessness that affect the functional capacity of the individual (APA, 2013). There are also cognitive and neurovegetative symptoms such as difficulty paying attention, memory changes, loss of appetite, weight changes, and sleep disruption. In the literature, female gender, decreased cognition, advanced age, poor coping skills, disease status, impaired functionality, and age have been reported as risk factors for depression (Moussavi et al., 2007).

Changes in human life also activate the adaptation process (Erdoğan et al., 2005). Mothers who have a disabled child experience stress in coping with the difficulties and crises they experience (Tura, 2017). This stress is characterized by not being able to provide the necessary care and support (Macias et al. 2003). Psychological resilience is recognized as a person's ability to recover from stress, crisis, or a difficult situation, that is, the ability to adapt successfully and healthily after a risk (Garmezy, 1991). It can also be considered a personality trait (Luthar et al., 2000).

1.1. Purpose of study

In this study, mothers of children aged 1-5 years who were born with hearing impairment and a child aged 1-5 years with normal development were found. It aimed to examine whether there was a significant difference between the psychological resilience and depression levels of the mothers.

2. Materials and Methods

2.1. Participants

This research was carried out in the Special Education and Rehabilitation Centers in Diyarbakir with a child aged 1-5 years old, a hearing-impaired child, and any disability between the ages of 1-5. Based on volunteerism, the participants are the mothers with children and those who do not have children. In the study, 51 mothers with hearing-impaired children formed the experimental group and 51 mothers without any disabilities formed the control group.

2.2. Data collection instrument

The data for the research were collected face-to-face using the survey method. The Demographic Information Form created by us, the Beck Depression Inventory (BDI), and the Short Psychological Hardiness Scale (KPS S) were applied to the participants. The surveys were first explained to the participants' mothers, who have or do not have a hearing-impaired child, by researchers and Special Education and Rehabilitation employees. It was applied in the form of a signed consent form, followed by the scales. The time to fill out the scale took an average of 10 minutes.

2.2.1. Demographic Information Form

It was created by the researchers. Information on age, ethnicity, occupational status, number of children, age of the child, income status, social relations, and leisure time was obtained from the participant. has been used for the purpose.

2.2.2. Beck Depression Inventory (BDI)

Objective measurement of depression symptoms was aimed at the inventory created by Beck et al. Adapted from Turkish by Hisli (1989). Consisting of 21 items in total, the inventory has 4 likes, including 0-4. The highest 63 points and the lowest 0 points can be taken. The content of the inventory includes guilt, dissatisfaction, pessimism, a sense of failure, a lack of appetite, etc. It contains questions about symptoms. The Cronbach Alpha internal consistency coefficient of the inventory was calculated at 0.80.

2.2.3. Short Psychological Resilience Scale (KPS S)

In the scale created by Smith et al. (2008), the psychological resilience of individuals is self-declared (Dogan, 2015). It is aimed to measure I. It was adapted into Turkish by Dogan in 2015. Consisting of six items in total, it is one-dimensional and has a 5- point Liker scale. The Cronbach Alpha internal consistency coefficient of the scale was calculated as.83. During the adaptation study of the scale, optimism, social support, positive coping, and ego strength were positively correlated, while negative coping, depression, negative emotions, stress, and pessimism were found to have a significant negative correlation.

2.3. Data Analysis

Statistical calculations of the data collected in the study were performed using IBM SPSS 22. Obtained demographic data were evaluated with the descriptive analysis method. Mothers whose children have a hearing impairment and no disability were compared in two groups and analyzed by analysis. Correlational analysis for the relationship between the variables (Pearson Correlation)determines whether there is a significant difference between the groups in terms of the variables. Non-sample t-tests and one-way analysis of variance were used. The difference between the

groups was determined by applying the Bonferroni post-hoc test. The p-value is accepted as 0.05 (p-value) for the significance level in all of the analysis processes of the research.

2.4. Ethics

Approval was sought for this research from the Ethics committee of Near East University. The research was approved by the Near East University Scientific Ethics Committee on 31.10.2019 with the project number YDÜ / SB/2019 / 531.

3. Results

Depression and psychological well-being of mothers of 1-5 - year -old children born with hearing impairment and mothers of 1-5 - year - old children with normal development the relationship between kd levels and their educational status is shown in Table 1.

Table 1

Results of Pearson Correlation Analysis Regarding the Relationship Between Educational Status of Mothers and BDI and KPS

		Education Status _	
Group of Mothers with a Child with Hearing Impairment	BDE	R	-,333
		P	,017
	KPS Ö	R	,044
		P	,762
Normally Developing Mother Group _	BDE	R	-.142
		P	,320
	KPS Ö	R	-.225
		P	,113

As a result of Pearson correlation analysis, no significant relationship was found between the education status of mothers with normally developing children and BDI and KPS S ($r = -,142, -.225, p > .05$). No significant relationship was found between the educational status of mothers with a hearing - impaired child and KPS S ($r = .044, p > .05$). On the other hand, a significant relationship was found between the educational status of mothers with a hearing -impaired child and BDI ($r = -.333, p < .05$). According to the result found, the level of depression decreases as the education level increases in mothers who have deaf children.

Depression and psychological well-being of mothers of 1-5 - year -old children born with hearing impairment and mothers of 1-5 - year - old children with normal development Comparison of kd levels is shown in Table 2.

Table 2

Test Results

		N	Cover.	SS	t	P
BDE	Group of Mothers with a Child with Hearing Impairment	50	51	17.69	3,969	,000
	Control Group	50	51	9.75		
KPS Ö	Group of Mothers with a Child with Hearing Impairment	50	51	3.02	-,092	,927
	Control Group	50	51	3,03		

From the results of the independent sample t-test, the KPS Exam was found between mothers who have a child with a hearing impairment and those with a child with a normally developing child. No significant difference was found according to the levels ($t = -.092, p > .05$). On the other hand, a significant difference was found between mothers who have a hearing-impaired child and those who have a child with a normally developing child, according to BDE levels. rounds ($t = 3.969, p < .05$). According to the result found, the depression level of mothers with a child with a hearing impairment is significantly higher than that of mothers with a child with a normally developing child.

Depression and psychological resilience levels of mothers with children aged 1-5 years who were born with hearing impairment were compared with sociodemographic variables. Its measurement is shown in Table 3.

Table 3

Independent Sample T - Test Results for the Difference Between People

	age _	N	Cover.	SS	T	p
BDE	between 20-30 years old	26	17.69	12.86	-,231	,818
	30-50 years old _	24	18.42	8.73		
KPS Ö	between 20-30 years old	26	3.19	,46	2,481	,017
	30-50 years old _	24	2.77	.72		
<i>Number of Children</i>						
BDE	1 child _	7	16.71	10.06	,030	,971
	1-3 children _	29	17.83	11.96		
	4-6 children _	15	17.87	10.67		
KPS Ö	1 child _	7	2.93	,49	,633	,535
	1-3 children _	29	3.11	.67		
	4-6 children _	15	2.88	.69		
<i>Child Age _</i>						
BDE	1-3	17	17.53	9.85	-,067	,947
	3-5	33	17.76	12.07		
KPS Ö	1-3	17	2.98	,54	-,277	,783
	3-5	33	3.04	.72		
<i>Population at home</i>						
BDE	nuclear family	37	16.08	11.63	-1,727	,091
	large family _	13	22.23	9.05		
KPS Ö	nuclear family	37	3.07	.71	1,037	,305
	large family	13	2.85	,49		
<i>Income</i>						
BDE	Income higher than the expense	7	21.00	13.84	,370	,693
	Income equals expense	23	17.78	13.43		
	Income less than expenses	20	16.70	7.15		

	Income higher than the expense	7	3.14	.74		
KPS Ö	Income equals expense	23	3.23	.65	4,419	,017
	Income less than expenses	20	2.69	.52		
Social Relationship						
	good _	25	11.84	9.02		
BDE	Middle	16	21.00	10.40	10,544	,000
	bad _ _ _	10	27.00	9.09		
	good _	25	3.18	.68		
KPS Ö	Middle	16	2.88	.58	1,517	,230
	bad _ _ _	10	2.83	.67		

In the result of the independent sample t-test, no significant difference was found between the ages of the mothers who had a hearing-impaired child according to BDE levels ($t = -.231, p > .05$). On the other hand, a significant difference was found between the ages of mothers who have a hearing - impaired child according to their KPS levels ($t = 2,481, p < .05$). According to this result, the psychological robustness levels of mothers with a hearing - impaired child between the ages of 20-30 were significantly higher than those of mothers with a hearing - impaired child between the ages of 30-50. It is seen that it is somehow higher.

No significant difference was found between the number of children of mothers with hearing-impaired children according to BDI and KPS S ($t = 030, 633, p > .05$). Similarly, the ages of the children of mothers who have a hearing-impaired child ($t = -.067, -.277, p > .05$) and the population at home ($t = -1,727, 1.037, p > .05$) according to BDI and KPS S.

In a one-way analysis of variance, no significant difference was found between the social relations of mothers with a hearing-impaired child, according to KPS S ($p > .05$). However, a significant relationship was found between the social relations of mothers with a hearing-impaired child according to BDI ($p < .05$). According to the results found, the depression levels of mothers with hearing-impaired children with good social relations were lower than those with moderate or poor social relations. It is knitted so that it is cold.

According to the BDI no significant difference was found between the income status of mothers who have a hearing-impaired child, according to BDI ($p > .05$). On the other hand, a significant difference was found between the income status of mothers with a hearing-impaired child according to KPS Ö ($p < .05$). According to the results , it was found that among the mothers who have hearing - impaired child, those whose income is equivalent to their expenses have a higher level of psychological robustness than those whose income is less than their expenses.

A comparison of depression and psychological resilience levels of mothers with normally developing children aged 1-5 years with sociodemographic variables is shown in Table 4

Table 4

Independent Sample T-Test- Variance Results for the Difference Between Relationships

	age _	N	Cover.	SS	T	P
BDE	between 20-30 years old	19	11.63	10.11		
	30-50 years old _	32	8.63	8.12	1,166	,249

KPS Ö	between 20-30 years old	19	2.88	.70	-1,271	,210
	30-50 years old _	32	3.11	.59		
<i>Number of Children</i>						
BDE	1 child _	16	10.69	8.33	,755	,476
	1-3 children _	25	8.24	9.78		
	4-6 children _	10	12.00	7.69		
KPS Ö	1 child _	16	2.86	.74	1,344	,271
	1-3 children _	25	3.17	,56		
	4-6 children _	10	2.93	,60		
<i>Child Age</i>						
BDE	1-3	18	10.22	8.82	,279	,781
	3-5	33	9.48	9.12		
KPS Ö	1-3	18	3.00	.69	-,262	,794
	3-5	33	3.05	.61		
<i>Population at home</i>						
BDE	nuclear family	41	8.71	8.05	-1,712	,093
	large family _	10	14.00	11.42		
KPS Ö	nuclear family	41	2.99	.62	-,861	,394
	large family _	10	3.18	.71		
<i>Income</i>						
BDE	Income higher than the expense	26	7.50	6.84	6,083	,004
	Income equals expense	13	7.62	6.93		
	Income less than expenses	12	16.92	11.44		
KPS Ö	Income higher than the expense	26	2.92	.59	,796	,457
	Income equals expense	13	3.09	.62		
	Income less than expenses	12	3.19	.75		
<i>Social Relationship</i>						
BDE	good _	31	8.58	7.20	1,021	,368
	Middle	14	12.64	11.49		
	bad _ _ _	6	9.00	10.58		
KPS Ö	good _	31	3.07	.57	2,444	,098
	Middle	14	2.77	.65		
	bad _ _ _	6	3.42	.77		

Ages ($t = 1.166, -1,271, p > .05$), number of children ($t = 1.166, -1,271 p > .05$) of mothers who had a child with normal development as a result of the independent sample t-test = .755, 1.344, $p > .05$), age of children ($t = .279, -.262, p > .05$) household population ($t = -1,712, -.861, p > .05$) and social relations ($t = 1,201, 2,444, p > .05$) according to BDI and KPS S, no significant difference was found.

From the result of one - way analysis of variance, no significant difference was found between the income status of mothers with normally developing children according to KPS S, ($t = .796, p > .05$). However, a significant difference was found between the income status of mothers with normally developing children according to BDI) ($t = 6.083, p < .05$). According to this result, it was determined that the depression levels of mothers who have a child with normal development and whose income is less than their expenses have higher levels of depression than those whose income is equal to their expenses.

4. Discussion

This study aimed to examine some sociodemographic characteristics, psychological stability, and depression in mothers whose children have a hearing impairment and mothers whose children do not have any disability. It has been revealed in the literature that families with a child with a hearing impairment experience shock, disapproval, and sadness when learning about hearing impairment (Sass-Lehrer, 2016).

According to the results of the research, it has been determined that the depression levels of the mothers whose children have hearing impairments are significantly higher than those of the mothers whose children do not have any disability. In addition, it was found that there was no significant difference between the two mother groups in terms of psychological stability.

Heiman (2002) states that the level of psychological stability in the families of children with special needs is of great importance within the scope of their child and family relations, and it is important as psychological support. He stated that he sees a function. In the study of Bildirici (2014), it was determined that the level of psychological well-being decreases as the burden increases in the families of children who need special education. According to Özcan et al. (2015), the psychological resilience scores of mothers with children with special needs are lower than those of mothers with typically developing children. It is reported that the birth of a child with special needs affects mothers seriously. However, it has been determined that the families of hearing-impaired children have increased psychological robustness levels after cochlear implant surgery (Saghafi et al., 2013). Contrary to the findings in the literature, in this study, it was found that the mothers of children with hearing impairment did not show a difference in kg compared to the mothers of children with normal development.

In addition, it has been determined that psychological resilience differs according to the education level of the mother and the monthly income of the family. It has been found that among mothers whose children have a hearing impairment, those whose income is equivalent to their expenses have a higher level of psychological stability than those whose income is less than their expenses. In their research, McConel et al. (2014) found that those with a high-income level from families with children with special needs have higher levels of psychological robustness. Financial support is more beneficial than informational support, especially for controllable stress (Ersoy and Çürük, 1999: 107). This is because almost half of the parents in the sample of the current study are primary school graduates, the majority of the mothers do not work, and their fathers are also killed. The fact that a significant portion of them work in jobs with low-income levels is among the indicators that they are disadvantaged in socio-economic terms. Considering the results obtained from this study, which have been done in the literature, it is seen that the psychological stability of mothers with a high-income level is also higher. is expected.

It has been determined that the psychological resilience of mothers whose children have a hearing impairment and whose children do not have any disability differs according to sociodemographic variables. According to the results found, the psychological robustness of mothers

whose children aged 20-30 had hearing impairments was significantly higher than that of mothers whose children between the ages of 30-50 had a hearing impairments. It is seen that it is high in the figure. In the research, it was determined that the level of psychological resilience in families with a child with hearing impairment is related to family solidarity, social support, problem-solving skills, and acceptance (Ahlert and Greff, 2012).

It can be said that parents who have a child with a hearing impairment have gone through similar processes and experienced similar feelings. In particular, the acceptance of having a disabled child, the planning of expectations and lifestyle, and the provision of the necessary care and education in line with the needs of the hearing-impaired child. Issues such as being tied up force families to adapt and the adaptation process is very painful. It is seen that the most important factors for families with a child with hearing impairment are healthy communication, expert support, and social relations. Uncertainty, a low level of knowledge, and lack of interaction are the reasons that increase depression.

Depression levels have been investigated in families with a child with hearing loss (Doğan, 2010). As a result of the research, families with a hearing-impaired child were found to have severe psychological deviation, anxiety, and depression compared to families who did not. Like families, children also face the problem of depression due to hearing impairment. According to the study by Watt and Davis (1991), hearing-impaired children experience more depression and anxiety than non-hearing-impaired children.

In this study, it was found that the level of depression decreased as the education level increased in mothers with hearing-impaired children. _ Families with low education levels have limited expectations of their children and do not have enough information about their children's disabilities. Mothers with hearing-impaired children need psychological support to be conscious of how to support their children and cope with this situation (Bahar et al., 2009). Boison (1987) collected data from 80 families participating in the research to determine the reactions and needs of families with a child with a hearing impairment after diagnosis. As a result of the research, all families stated that they could accept the situation more easily and fulfill the requirements of hearing impairment by overcoming the first shock with the guidance and counseling services to be provided to them during the diagnosis. As a result of research and literature, it can be said that raising the educational status of mothers will decrease depression levels.

It has been determined that the depression levels of mothers whose child has a hearing impairment and whose child does not have any disability differ according to sociodemographic variables. As the education level increases, the level of depression decreases in mothers with hearing-impaired children. In the study of Dereli and Okur (2008), it was stated that the level of depression did not change as the education level increased in families with children with special needs. At this point, it is seen that the research findings do not overlap with the study findings.

It has been determined that the depression levels of mothers with hearing-impaired children whose income is less than their expenses do not differ compared to those whose income is higher than their expenses and whose income is equal to their expenses. It is known that financial problems trigger depression (Kaya, 2007). In addition, in Akbaş's (1999) study, assuming the responsibility of the family alone, having a low-income level contributed to the increase in the level of depression. In this context, the change in depression levels of individuals who do not have a hearing-impaired child, depending on their income level, does not coincide with the findings of this study.

It is seen that the depression levels of mothers with hearing-impaired children with good social relations are lower than those with moderate or poor social relations. The quality of life increases with good social relations. One of the greatest needs of families with a hearing-impaired child is support and socialization (Akçamete and Kargın, 1996). In addition to financial needs, the need for social relations has a great place in the lives of families with a child with a hearing impairment. It is of great importance that families with hearing-impaired children interact with each other (Sass-Lehrer, 2016).

5. Conclusion

A significant difference was found between mothers with hearing-impaired children and mothers with children with normal development according to Beck Depression Inventory levels. Mothers with hearing-impaired children have a significantly higher level of depression than mothers with children with normal development. As a result of Pearson correlation analysis, no significant relationship was found between the educational status of mothers who had children with normal development and the Beck Depression Inventory and Short Psychological Resilience Scale. On the other hand, a significant relationship was found between the educational status of mothers with hearing-impaired children and the Beck Depression Inventory. Accordingly, the level of depression decreases as the education level increases in mothers with hearing-impaired children.

As a result of the one-way variance analysis, no significant difference was found between the social relations of mothers with hearing-impaired children according to the Short Psychological Resilience Scale. On the other hand, a significant relationship was found between the social relationships of mothers who had hearing-impaired children according to the Beck Depression Inventory. According to this result, it was seen that those who had good social relations among the mothers with hearing-impaired children had lower depression levels than those with moderate and bad social relations.

Mothers with children with disabilities should strive not only for the needs and education of their children but also for their own needs. These mothers, who dedicate their energy to their children, need to be informed about receiving psychological support due to their high levels of depression.

References

- Ahlert, A. and Greff, A. (2012). Resilience factors associated with adaptation in families with deaf and hard of hearing children. *American Annals of the deaf*, 157(4), 391-404. <https://www.jstor.org/stable/26234852>
- Akbaş E. (2003). Poverty and Childhood Reconstruction. _ _ Social Work Symposium Abstract Book, Antalya 2003; s. 192-193. https://www.academia.edu/35063373/COMPARISON_OF_TRAIT_ANXIETY_LEVELS_OF_PARENTS
- Akçamete, G. and Kargin, T. (1996). Determining the needs of mothers with hearing impaired children. *Journal of Special Tendency*, 2(2), 7-24. <https://tinyurl.com/mr22ryb2>
- Aydoğan A. Determination of Hope Level in Families with Disabled Children. _ Hacettepe University, Ph.D. Thesis (1999); p.121-7
- Bahar, A., Bahar, G., War, H., Parlar, S., (2009). Determining the depression and anxiety levels of mothers of disabled children and their coping styles with stress. *Firat Journal of Health Services*, Vol: 4, 11: 98- 111.
- Bildirici, F. (2014). The Relationship Between Family Burden and Psychological Resilience in Families with Children with Special Education Needs. Unpublished Master Thesis. Haliç University, Institute of Social Sciences.
- Boison, B. K. (1987). Diagnosis of deafness. *International Journal of Rehabilitation Research*, 10 (2), 220-224.
- Bright, J., Hayward, P. & Clement, J. (1997), Dealing with Chronic Stress: Coping Strategies, Self-Esteem and Service Use in Mothers of Handicapped Children, *Journal of Mental Health*, 6(1), 67-75. <https://www.tandfonline.com/doi/abs/10.1080/09638239719058>
- Centers For Disease Control and Prevention. Hearing Loss in Children. (2022). Available from: <https://www.cdc.gov/ncbddd/hearingloss/data.html>

- Dereli, F., & Okur, S. (2008). Engelli çocuğa sahip olan ailelerin depresyon durumunun belirlenmesi.
- Dogan, M. (2010). Comparison of Stress, Depression and Trait Anxiety Symptoms of Parents with and Without a Hearing-Impaired Child. *International Journal of Early Childhood Special Education*, 2(3). <https://tinyurl.com/486teeds>
- Dogan, T. (2015). The Turkish version of the short psychological robustness scale: A study of validity and reliability. *The Journal of Happiness & Well-Being* 3 (1), 93-102. <https://www.tayfundogan.net/wp-content/uploads/2016/09/K%C4%B1saPsikolojikSaglamlikOlcegi.pdf>
- Duygun, Tolga and Sezgin, Nilhan. (2003), Stress Symptoms, Coping Styles with Stress and the Effect of Perceived Social Support on the Level of Burnout in Mothers of Mentally Handicapped and Healthy Children, *Turkish Psychology Magazine*, 18:37-52. <https://kutuphane.dogus.edu.tr/mvt/pdf.php?pdf=0003701&lng=0>
- Erdoğan, S., Şanlı, HS and Bekir, Ş. H. (2005). Adaptation problems of Gazi University Faculty of Education students to university life. *Kastamonu Education Journal*, 13(2), 479 - 496. https://www.academia.edu/download/32964255/13_2.pdf#page=171
- Ersoy, O. and Rot, N. (2009). The importance of social support in mothers with children with special needs. *Journal of Family and Society*, 5 (17), 104-110. <https://dergipark.org.tr/en/pub/spcd/article/227435>
- Garmezy, N. (1991). Resiliency and vulnerability to adverse developmental outcomes associated with poverty. *American Behavioral Scientist*, 34(4). <https://journals.sagepub.com/doi/pdf/10.1177/0002764291034004003>
- Global Health Data Exchange (GHDx).2018. Institute of Health Metrics and Evaluation. . <http://ghdx.healthdata.org/gbd-results-tool?params=gbd-api-2019permalink/d780dffbe8a381b25e1416884959e88b> (Accessed May 1, 2021).
- Heiman, T. (2002). Parents of Children with Disabilities: Resilience, Coping, and Future Expectations. *Journal of Developmental and Physical Disabilities*, 14(2), 159-171. <https://link.springer.com/article/10.1023/A:1015219514621>
- Hisli, N. (1989). A Study on the Validity of the Beck Depression Inventory, *Journal of Psychology*, 22, 118-126.
- Kaya, B. (2007). Depression: A Socioeconomic and Cultural Perspective. *Clinical Psychiatry*, 10(6), 11-20.
- Lederberg A. R., ve Golbach T. (2002). Parenting stress and social support in hearing mothers of deaf and hearing children: A longitudinal study. *The Journal of Deaf Studies and Deaf Education*, 7, 330–345. <https://doi.org/10.1093/deafed/7.4.330>
- Luthar, Suniya, Cicchetti, Dante. veBecker, Bronwyn. (2000), The Construct of Resilience: A Critical Evaluation and Guidelines for Future work, *Child Development*,71(3): 543-562. <https://srcd.onlinelibrary.wiley.com/doi/abs/10.1111/1467-8624.00164>
- Macias, Michelle, Saylor, Conway, Rowe, Brandyve Bell, Nancy. (2003), Age-Related Parenting Stress Differences in Mothers of Children with Spinabifida, *Psychological Reports*, 93: 1223-1232. <https://journals.sagepub.com/doi/abs/10.2466/pr0.2003.93.3f.1223>
- McConel, D., Savage, A. ve Breitreuz, R. (2014). Resilience in families raising children with disabilities and behavior problems. *Research in Development Disabilities*, 33(4), 833-848. <https://www.sciencedirect.com/science/article/pii/S0891422214000195>

- Mitchell, R. E., ve Karchmer, M. A. (2004). Chasing the mythical ten percent: Parental hearing status of deaf and hard of hearing students in the United States. *Sign Language Studies*, 4(2), 138–163. <https://doi.org/10.1353/sls.2004.0005>
- Moussavi, S., Chatterji, S., Verdes, E., Tandon, A., Patel, V., ve Ustun, B. (2007). Depression, chronic diseases, and decrements in health: results from the World Health Surveys. *The Lancet*, 370(9590), 851-858. <https://www.sciencedirect.com/science/article/pii/S0140673607614159>
- Nancy, K., Mellon, M. S. (2009). Parental Response to the Diagnosis of Hearing loss. In Niparko, J. K. (Eds) in *Cochlear Implants: principles & practices*. <https://jhu.pure.elsevier.com/en/publications/cochlear-implants-principles-and-practices>
- Özcan, N., Erooğlu, Y., and Peker, A. (2015), Psychological Robustness of Mothers with Children with Special Needs and with Children with Typically Developed Children, Investigation of Well-Being and Happiness Levels., *Sakarya University Journal of Education*, 142- 150. <https://dergipark.org.tr/tr/pub/suje/issue/20640/220114>
- Saghafi, F., Hesmati, Z., Khaledian, M. ve Dadashkarimi, H. (2013). The effects of cochlear implants on parental mental health. *Tech J Engin ve App Sci.*, 3(16), 1855-1861. <https://tinyurl.com/34aj8kbc>
- Sass-Lehrer, M. (2016). Early intervention for deaf and hard-of-hearing infants, toddlers, and their families: Interdisciplinary perspectives. Oxford University Press.
- Tura, G. (2017). Investigation of Anxiety, Depression and Psychological Resilience Levels of Mothers with Disabled and Non-Disabled Children. *Journal of Dicle University Institute of Social Sciences*, (18), 30-36.
- Vash, CV ve Crewe, NM (2004). *Engellilik Psikolojisi*. New York: Springer Publishing Co. 333.
- Watt, J. D. ve Davis, F. E. (1991). The prevalence of boredom proneness and depression among profoundly deaf residential school adolescents. *Am Ann Deaf*, 136(5), 409-413.
- World Health Organization. Global burden disease. Health report. (2004). Available from http://www.who.int/healthinfo/global_burden_disease/GBD_report_2004update_full.pdf?ua=1.11-02-2021 .
- World Health Organization. Global health estimates (2016): disease burden by cause, age, sex, country, and region. Health Report. (2018). Available from: www.who.int/healthinfo/global_burden_disease/en.11-02-2019.