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Abstract

This research was conducted to investigate social adaptation and skills of five to six year old children diagnosed with epilepsy. The study population consisted of the children applied to the Child Neurology and Child Psychiatry Polyclinics of Mersin University School of Health Research and Application Hospital and who were diagnosed with epilepsy. Eighty-six children between five and six years of age applied to Child Neurology and Child Psychiatry Polyclinics of Mersin University School of Health Research and Application Hospital and were diagnosed with epilepsy. The study population consisted of these children. The children in the study group were diagnosed with epilepsy by a pediatric neurology specialist on the basis of their clinical symptoms, EEG findings, and international epilepsy classification (International League Against Epilepsy). The cases were selected from among the children received antiepileptic treatment and outpatient treatment for more than six months and three years. The sociodemographic Information Form and Social Adaptation and Skills Scale developed by Işık (2007) to determine the levels of social adaptation and skill of children were used in all cases included in the study. In an analysis of the data, Mann-Whitney U – test, one of the non-parametric measurements, for the two-group comparisons, Kruskal -Wallis H test with Bonferroni correction for more than two -group comparisons were used due to the test scores of the subjects did not show a normal distribution. The study determined that the child's gender did not significantly affect their social adaptation or skills, the presence of other chronic disease, maternal education levels, and maternal employment status contributed to significant differences in their social adaptation and skill scores.

Keywords: *Epilepsy, social skills, social adaptation, social discordance.*

INTRODUCTION

Epilepsy is defined as a chronic brain disease with different ecologies, caused by excessive emptying of brain neurons, and characterized by recurrent seizures (Duffy, 1998; Şahin-Cankurtaran, Uluğ and Saygı, 2004). Epilepsy is a neurological condition that is common in childhood, and has a cumulative lifetime prevalence of 3% (Keene et al., 2005). Presently, epilepsy is commonly

approached within the practice of child psychiatry consultation-liaison psychiatry (Franks, 2003; Gürkan, 2007). In studies conducted in different provinces in Turkey, the prevalence of epilepsy was determined to be between 6,1‰ and 10,2‰ country wide (Aziz, Güvener, Akhtar and Hasan, 1997; Topalkara et al., 1999; Aydın, Ergor, Ergor and Dirik, 2002; Onal et al., 2002; Çalışır, Bora, Irgil and Boz, 2006; Demirci, Dönmez, Gündoğar and Baydar, 2007). A study conducted in Turkey identified that the prevalence of epilepsy in children between 0-16 years of age as 8‰ (Serdaroğlu et al., 2004). The rates of cognitive, social, emotional, behavioral and academic problems in children diagnosed with epilepsy were found to be higher than the normal population and populations with other chronic diseases (Soysal et al., 2003; Chiou and Hsieh, 2008; Ronen et al., 2010; Ibinga et al., 2015). These difficulties have been associated with many factors, including underlying neurological conditions, family reactions, types of epilepsy and epilepsy medications. Existing research has shown that children diagnosed with epilepsy experienced increased learning problems, attendance to school problems, absence of social support, attention deficit and hyperactivity disorder, anxiety disorders, depression, suicidal, behavior and compliance issues (Türkbay, Akın and Söhmen, 2000; Dunn and Austin, 2004; Şahin Cankurtaran et al., 2004; Pellock, 2004; Caplan et al., 2005; Schubert, 2005; Gürkan, 2007; Ali, Tomek and Lisk, 2014; Bompoti et al., 2014; Byars et al., 2014).

Epilepsy is characterized as a part from other chronic diseases by its sudden and unpredictable symptoms. Epileptic children are often faced with many psychological stressors following their diagnoses of epilepsy. Loss of control and autonomy, seizure-related anxiety, behavioral and cognitive disorders, social stigma, rejection and discrimination, over-protection and rejection by parents, and excessive dependence on parents (for children) are factors that increasingly complicate successful adaptation to life with this chronic illness (Thompson and Upton, 1992; Ibinga et al., 2015).

Many difficulties experienced by children with epilepsy are associated with detection and assessment of the children themselves, their family and environment society which can impact their lives more than epilepsy itself. Psychosocial factors, such as children's personality development, their responses to the disease, relationships with family members, school performance and friendship relations, should be addressed in order to assess children with epilepsy (Türkbay et al., 2000; Hirfanoğlu, et al., 2009). Psychosocial factors can have positive or negative effects on the social adaptation of children diagnosed with epilepsy. Social adaptation is an important process that continues into adulthood and throughout life; social adaptation skills provide mechanisms for children that serve as prerequisite aids in order to successfully interact with the community and have a successful social life (Csóti, 2001). The acquisition of social skills plays an important role in ensuring social adaptation. Social skills, which are defined as the abilities of individuals to adapt to their environment, include behaviors such as cooperation, responsibility, and self-control (Ceylan, 2009; Hupp, LeBlanc, Jewell and Warnes, 2009). The development of social adaptation and skills in the

preschool period is the basis of social adaptation and skills in later years. For children who gain patterns of behavior by observing and imitating the individuals around them, parents' attitudes about child development and education, and communication skills significantly shapes the level of social adaptation and skills experienced by the child (Işık, 2007; Bee and Boyd, 2012).

Factors that negatively affect the social adaptation and skills of children further include: A chronic disease, disruption of social, educational and interpersonal relationships by epileptic seizures, the side effects of antiepileptic drugs, frequent hospitalization, the overly protective attitude of parents toward their children with epilepsy, and the presence of societal prejudices against children with epilepsy and their families. Furthermore, studies reveal that children diagnosed with epilepsy have more limited social skills than their peers (Tse, Hamiwka, Sherman and Wirrell, 2007; Hamiwka, Hamiwka, Sherman and Wirrell, 2011). The research included in this study was conducted in order to investigate the effect of three variables: the presence of chronic diseases other than epilepsy, level of mother's education and employment status of the mother on the social adaptation and skills of children five to six years of age, diagnosed with epilepsy.

METHOD

Model of the Study

This research uses a descriptive and screening model type because it was carried out in order to investigate the effects of certain variables on social adaptation and skills of children five to six years of age diagnosed with epilepsy.

Population and Sample

The study population consisted of children diagnosed with epilepsy who applied to Polyclinics of Child Neurology and Child Psychiatry of Mersin University School of Health Research and Application Hospital. Eighty-six children of five to six years of age were diagnosed with epilepsy of those who applied to the Polyclinics of Child Neurology and Child Psychiatry of Mersin University School of Health Research and Application Hospital, and these were included in the study group of the research. The children in the study group were diagnosed with epilepsy by a pediatric neurology specialist on the basis of clinical symptoms and EEG findings according to the international epilepsy classification (Commission on Classification on Terminology of the International League Against Epilepsy, 1989). The cases were selected from a group of children who had received antiepileptic treatment and who had outpatient treatment for more than six months and three years. The durations of antiepileptic therapy in the group of children are as follows: 15.1% for one year, 19.8% for six months and two years, and 45.3% for more than three years. It has been determined that during the antiepileptic treatment 60.5% used drugs; 24.4% did not use any drugs, 15.1% discontinued drug use; 59.3% did not receive additional support to antiepileptic therapy; 27.9% and 12.8% had received the support of the family therapy and individual therapy, respectively. It has been determined that these children had behavioral problems, such as nail-biting 17.4%; thumb sucking 12.8%; bed-wetting 25.6%; disruptive

behavior 23.3%; hyperactivity 47.7%; and anxiety-fear 25.6%. It has also been identified that there were no close relatives with epilepsy in the families of 68.6% of children, while 31.4% of them had a first-degree relative with a diagnosis of epilepsy (father, brother, sister, grandparent, etc.). Lastly, it has been determined that the mothers of 52.3%, 22.1%, 12.8%, 12.8%, 88.4%, 11.6% were high school and university graduates, primary school graduates, literate, illiterate; not working and working, respectively.

The lack of a matched control group can be a possible limitation of this study. Other possible limitations may be due to the examination of social adaptation problems that include not being able to distinguish between the severities of epilepsy diseases; i.e. if the children used combined antiepileptic treatments, if they had mental disorders, if they used psychiatric drugs, or if they have diseases such as mental retardation or cerebral palsy. The study was conducted with excluded groups including more than two antiepileptic users, patients with mental retardation, cerebral palsy and other psychiatric comorbidities, and with a family history such as a parent with schizophrenia. As a result, choosing the sample group more purely increases the reliability of the results obtained.

Data Collection Tool

The Sociodemographic Information Form and Social Adaptation and Skill Scale in order to determine the levels of children's adaptation and skills were applied to all the cases included in the study.

Sociodemographic Information Form: Questions about the child's date of birth, gender, number of siblings, duration of continuing pre-school education, the presence of chronic diseases other than epilepsy, education level of the parents and the mother's employment status were included in the question form developed by researchers. Additionally, questions regarding the age of epilepsy diagnosis, drug use, the status of the exploitability of support services for treatment, the presence of behavioral problems, and the presence of individuals diagnosed with epilepsy in the family were included in the Form to determine the properties of the sample. Socio-demographic Information Forms were completed by the children's mothers after necessary explanations.

Social Adaptation and Skill Scale: The scale is developed in order to determine the levels of social adaptation and social skills of five and six year-old children it consist of two sub-tests. These subtests are social adaptation (1-17 substances) and social discord (18-25 substances). The social adaptation sub-test consists of 17 items assessing the children's positive skills of communication, making friends, empathizing, understanding feelings of other people, solving problems, collaborating, explaining feelings and thoughts, helping, being tolerant, and following the rules. The social discordance sub-test consists of 8 items assessing the children's negative skills of fighting, interrupting others, harming the environment, complaining, being angry, and being affected by friends who do not comply with the rules. People who know the child (parents or teachers) use and

assess the child based on the social adaptation and skill scale. The social adaptation sub-test requires a three point Likert-type scale, which consists of: "all the time (3 points)," "sometimes (2 points)," and "never (1 point)". The social discordance sub-test scale includes; "all the time (1 point)", "sometimes (2 points)" and "never (3 points)". The highest and lowest possible scores that can be obtained from the sub-test of social adaptation are 51 and 17, respectively, and the highest and lowest possible scores that can be obtained from the sub-test of social discordance are 24 and 8, respectively. The total social skill score is obtained by adding the points obtained from Social Adaptation and Skill Scale. High scores obtained from the scale in this study show that the social adaptation and skills of children is high. As a result of the validity and reliability study, the reliability coefficient for social adaptation sub-test and the reliability coefficient for social discordance sub-test were defined as $\alpha=.93$ and $\alpha=.83$, respectively (Işık, 2007). In another study, the internal consistency reliability of the social adaptation sub-test and social discordance sub-test as $\alpha=0.92$ and ($\alpha=0.87$), respectively, as a result of the reliability study performed (Durualp, 2009). In this study "Social Adaptation and Skill Scale" were completed by the children's mothers.

Data Analysis

Kolmogorov-Smirnov (KS) test was used to analyze whether Social Adaptation and Skill Scale scores show normal distribution. Mann-Whitney U-test, which is non-parametric measurement, was used for two-group comparisons (the presence of chronic disease other than epilepsy and maternal employment status with children's social adaptation and skills). Additionally, Kruskal-Wallis H with Bonferroni correction, also non-parametric measurement was used for more than two-group comparisons (whether if the maternal education level creates a difference in children's social adaptation and skills) based on the scores that the subjects obtained from the test that did not show a normal distribution (Büyüköztürk, 2009). The scale applied here was as follows .05 was a significant level, $p<.05$ was a significant difference, and $p>.05$ was no significant difference.

RESULTS

The results obtained from this research conducted in order to examine social adaptation and skills of five to six year-old children diagnosed with epilepsy is presented below in the tables.

Table 1. Mann-Whitney U Test Results of Scores of Social Adaptation and Skill Scale by Gender

| <i>Gender</i> | <i>n</i> | <i>Social Adaptation</i> | | | <i>Social Discordance</i> | | |
|---------------|----------|--------------------------|----------|----------|---------------------------|----------|----------|
| | | <i>Rank Avg.</i> | <i>U</i> | <i>p</i> | <i>Rank Avg.</i> | <i>U</i> | <i>p</i> |
| Girl | 47 | 45.42 | 841.5 | 0.51 | 40.14 | 785.5 | 0.25 |
| Boy | 39 | 41.9 | | | 46.29 | | |

* $p<.05$

The data in Table 1 reveal that, there was no significant difference between social adaptation scores ($U=841.5$, $p>0.05$) and social discordance score ($U=785.5$,

$p > 0.05$) of girls and boys diagnosed with epilepsy. Although there was no significant difference by gender, it is noteworthy that the average of social adaptation of the girls was higher than boys and the average of social discordance of boys was higher than girls.

Table 2. Mann-Whitney U Test Results of Scores of Social Adaptation and Skill Scale by the State of the Presence of Chronic Disease other than Epilepsy

| <i>Chronic Disease</i> | <i>n</i> | <i>Social Adaptation</i> | | | <i>Social Discordance</i> | | |
|------------------------|----------|--------------------------|----------|----------|---------------------------|----------|----------|
| | | <i>Rank Avg.</i> | <i>U</i> | <i>p</i> | <i>Rank Avg.</i> | <i>U</i> | <i>p</i> |
| Yes | 25 | 34.52 | 538 | 0.03* | 42.98 | 749.5 | 0.90 |
| No | 61 | 47.18 | | | 43.71 | | |

* $p < .05$

The data in Table 2 demonstrate that, there was a statistically significant difference between the presence of chronic disease other than epilepsy in children diagnosed with epilepsy and in social adaptationscores ($U=538$, $p < 0.05$), while there was no statistically significant difference in social discordance score ($U=749.5$, $p > 0.05$). Accordingly, it was determined thatsocial adaptationscores of children without chronic disease other than epilepsy were higher than those of children with chronic disease other than epilepsy (heart disease, eye diseases, allergic asthma and so on).

Table 3. Kruskal-Wallis H Test Results of Scores of Social Adaptationand Skill Scale by Education Level of Mother

| <i>Education Level of Mother</i> | <i>n</i> | <i>Social Adaptation</i> | | | | | <i>Social Discordance</i> | | | |
|----------------------------------|----------|--------------------------|-----------|----------------------|----------|-----------------------------------|---------------------------|-----------|----------------------|----------|
| | | <i>Rank Avg.</i> | <i>sd</i> | <i>X²</i> | <i>p</i> | <i>Binary Comparison</i> | <i>Rank Avg.</i> | <i>sd</i> | <i>X²</i> | <i>p</i> |
| Illiterate | 11 | 29.05 | 3 | 7.971 | 0.04* | Illiterate-High school and higher | 35.73 | 3 | 2.118 | 0.54 |
| Literate | 11 | 37.86 | | | | | 42.59 | | | |
| Primary education | 19 | 39.39 | | | | | 43.20 | | | |
| High school and higher | 45 | 50.14 | | | | | 49.24 | | | |

* $p < .05$

The data in Table 3 show that, there was a statistically significant difference between the education level of the mother and thesocial adaptation score of children diagnosed with epilepsy ($X^2=7.971$, $p < 0.05$), while there was no statistically significant difference between a social discordance score ($X^2=2.118$, $p > 0.05$). Considering the rank averages it has been determined thatsocial adaptationscores of children whose mothers' education level was high school and

higher were significantly higher than children whose mothers' education level was illiterate.

Table 4. Mann Whitney U Test Results of Scores of Social Adaptation and Skill Scale by Working Status of Mother

| <i>Working Status</i> | <i>n</i> | <i>Social Adaptation</i> | | | <i>Social Discordance</i> | | |
|-----------------------|----------|--------------------------|----------|----------|---------------------------|----------|----------|
| | | <i>Rank Avg.</i> | <i>U</i> | <i>p</i> | <i>Rank Avg.</i> | <i>U</i> | <i>p</i> |
| Working | 10 | 39.85 | 343.5 | 0.62 | 59.80 | 217.0 | 0.02* |
| Not Working | 76 | 43.98 | | | 41.36 | | |

* $p < .05$

The data in Table 4 demonstrate that, there was no statistically significant difference between the working status of the mother and the social adaptation score of children diagnosed with epilepsy ($U=343.5$, $p>0.05$), while there was a statistically significant difference between the working status of the mother and the social discordance score ($U=217.0$, $p<0.05$). Considering the rank averages, it has been determined that, the social adaptation and skill scores of children diagnosed with epilepsy whose mothers were working were lower.

DISCUSSION

Social skills have a facilitating effect on an individual's communication with other people and are important in order to have socially acceptable behaviors. Social skills have an important place in human life. Social adaptation is the result of effectively using social skills in daily life. An individual's low social adaptation and social skills have a negative impact on their academic success as well as possibly leading to psychological problems. For this reason, acquiring and developing social skills in the pre-school period is an important goal of childhood (Tse et al., 2007; Günindi, 2008; Ronen et al., 2010).

The pre-school period is crucial because it is a period of time that children show progress in terms of developing of social adaptation and skills, and the basics of personality (Wortham, 2005). Personality characteristics of children diagnosed with epilepsy in the pre-school period are often characteristic of difficult temperament. This is an indicator that these children may have difficulties in terms of personality and psychosocial behaviors in the future (Franks, 2003; Gürkan, 2007). Existing studies also show that adults who had diagnoses of epilepsy in childhood have a high level of psychosocial problems and low social adaptation and skills (Jalava, Sillanpaa, Camfield and Camfield, 1997; Keene et al., 2005; Tse et al., 2007; Chiou and Hsieh, 2008; Rantanen et al., 2009).

In this study conducted in order to examine the social adaptation and skills of five to six-year-old children diagnosed with epilepsy, there was no significant difference between the social adaptation and skill scores of boys and girls (Table 1). Although there was no significant difference by gender, it has been determined

that the rank average of social adaptation of girls diagnosed with epilepsy was higher than boys the rank average of social discordance of boys diagnosed with epilepsy was higher than girls. Caplan et al. (2005) stated that there was no difference in social interaction of children with epilepsy according to gender. This finding is parallel with the findings of this study.

In this study, it has been determined that social adaptation scores of children without chronic disease other than epilepsy were higher than children with chronic disease other than epilepsy (heart disease, eye diseases, allergic asthma and so on) (Table 2). Chronic disease is a condition which shows deviation from the norm or disorder, causing permanent inability pathological changes, requiring special training for the rehabilitation of patients. Patients are expected to require care, supervision and control for a long time. The most common chronic diseases of childhood are asthma, epilepsy and arthritis (Fazlıoğlu, Hocaoğlu and Sönmez, 2010). Children with chronic diseases carry a greater risk of social problems, and their social adaptation and skills are on the lower level. Epileptic children are having more psychosocial problems than normal children and other children with chronic illness (Meijer et al., 2000; Davies, Heyman and Goodman, 2003; Rantanen et al., 2009; Kariuki et al., 2012, Rantanen, Eriksson and Nieminen, 2012). Therefore, children with other chronic diseases associated with epilepsy may have lower social adaptation scores than children who do not have chronic diseases other than epilepsy.

Another result of the study is that social adaptation scores of children with epilepsy whose mothers had high school and higher education level were significantly higher than the children whose mothers were illiterate (Table 3). Mother-child interaction has an important role in the child's development of social relations. Healthy communication established between mother and child is the basis of healthy communication of the child with others in the future (Çağdaş and Ari, 1999). Therefore, a high education level of the mother provides the desired quality of relationships within the family and makes the mother more effective in helping the child's development and education. Studies confirm that social emotional development of children were affected positively by the increase of educational level of their mothers (Güven et al., 2006; Seven, 2008; Pushpalata and Chandra, 2009). The results obtained from this study correspond with the results of other studies.

In this study, the results reflect that social adaptation and skills of five to six-year-old children diagnosed with epilepsy whose mother is working are lower (Table 4). Many working mothers indicate that they can show enough attention and love to their children at the time that they allocate for the children. However working mothers spend shorter quality time with their children than non-working mothers, which leads to difficulties in establishing the relationship between children and mothers. Furthermore, non-working mothers spend more time and energy for physical care for and discipline of their children; being with the child at home all day leads to a more powerful mother-child relationship between these families.

Also, working mothers may experience difficulties in addition to the special situation created by the responsibilities of having a child with epilepsy. These difficulties may adversely affect the mother-child relationship of working mothers (Mu, Kuo and Chang, 2005; Seçer, Çeliköz and Yaşa, 2008; Fazlıoğlu et al., 2010).

In conclusion, the findings derived from this study showed that there was a significant difference in social adaptation and skills of 5-6 year old children with epilepsy according to the status of having other chronic diseases, mothers' educational level and employment status while no significant difference was reported according to child's gender.

In the light of these findings, some suggestions can be given as follows:

- Parent education programs may be prepared to raise awareness on first level preventive health services against head injuries and meningitis infections both of which are important and preventable risk factors of epilepsy.
- Children with a family history including epilepsy can be medically checked in a more detailed manner.
- Parents of children with epilepsy can be informed through various media about psychiatric consultation, developmental evaluation, quality of life, psychological factors.
- Parent education sessions can be organized for parents of children with epilepsy about how to cope with seizures, how to protect their children from health risks caused by epilepsy and how to increase the cognitive and intellectual capacity of their children.
- In order to raise social awareness about epilepsy and to change the attitudes towards people with epilepsy seminars may be organized with the aim of enhancing opportunities of people with epilepsy to participate fully in social life and enhancing their status and functionality in society.
- The results can be re-tested with a higher number of subjects since in this study a limited number of participants were included.
- A comprehensive comparative study can be designed to compare the results of studies carried out with children with epilepsy and the results of studies carried out with children suffering from other chronic diseases.

REFERENCES

- Ali, D.B., Tomek, M., & Lisk, D.R. (2014). The effects of epilepsy on child education in Sierra Leone. *Epilepsy & Behavior*, 37, 236-240. doi: 10.1016/j.yebeh.2014.07.007.
- Aydın, A., Ergor, A., Ergor, G., & Dirik, E. (2002). The prevalence of epilepsy amongst school children in Izmir, Turkey. *Seizure*, 11(6), 392-396. doi:10.1053/seiz.2002.0684.
- Aziz, H., Güvener, A., Akhtar, S.W., & Hasan, K.Z. (1997). Comparative epidemiology of epilepsy in Pakistan and Turkey: Population-based studies using identical protocols. *Epilepsia*, 38, 716-722.
- Bee, H. & Boyd, D. (2012). *The developing child*. (13th ed). New Jersey: Pearson.
- Büyüköztürk, Ş. (2009). *Data Analysis Manual for the Social Sciences* (8th Edition). Ankara: Pegem Academy Press.
- Bompori, E., Niakas, D., Nakou, I., Siamopoulou-Mavridou, A., & Tzoufi, M.S. (2014). Comparative study of the health-related quality of life of children with epilepsy and their parents. *Epilepsy & Behavior*, 41, 11-17. doi: 10.1016/j.yebeh.2014.09.009.
- Byars, A.W., deGrauw, T.J., Johnson, C.S., Perkins, S.M., Fastenau, P.S., Dunn, D.W., & Austin, J.K. (2014). Language and social functioning in children and adolescents with epilepsy. *Epilepsy & Behavior*, 31, 16-171. doi: 10.1016/j.yebeh.2013.11.007.
- Çağdaş, A. & Arı, R. (1999). The effects of education of mother child communication language on 4-5 years old children's social development. *Selcuk University Institute of Social Sciences*, 5, 392-404.
- Çalışır, N., Bora, I., Irgil, E., & Boz, M. (2006). Prevalence of epilepsy in Bursa city center, an urban area of Turkey. *Epilepsia*, 47(10), 1691-9. doi:10.1111/j.1528-1167.2006.00635.
- Caplan, R., Sagun, J., Siddarth, P., Gurbani, S., Koh, S., Gowrinathan, R., & Sankar, R. (2005). Social competence in pediatric epilepsy: Insights into underlying mechanisms. *Epilepsy & Behavior*, 6(2), 218-28. doi:10.1016/j.yebeh.2004.11.020.
- Ceylan, Ş. (2009). *The validity and reliability study of Vineland social-emotional early childhood scale and the examination of the effect of creative drama education on social-emotional behavior of children five years of age who attended pre-school educational institution*. Unpublished PhD thesis. Gazi University, Institute of Education Sciences, Ankara, Turkey.
- Chiou, H.-H., & Hsieh, L.-P. (2008). Parenting stress in parents of children with epilepsy and asthma. *Journal of Child Neurology*, 23(3), 301-6. doi:10.1177/0883073807308712.
- Commission on Classification and Terminology of the International League Against Epilepsy (1989). Proposal for revised classification of epilepsies and epileptic syndromes. *Epilepsia*, 30, 389-399.
- Csóti, M. (2001). *Social awareness skills for children*. London: Jessica Kingsley Publishers.



- Davies, S., Heyman, I., & Goodman, R.A. (2003). A population survey of mental health problems in children with epilepsy. *Developmental Medicine and Child Neurology*, 45(5), 292-5.
- Demirci, S., Dönmez, M.C., Gündoğar, D., & Baydar, L.Ç. (2007). Public awareness of, attitudes toward, and understanding of epilepsy in Isparta, Turkey. *Epilepsy & Behavior*, 11, 427-433. doi:10.1016/j.yebeh.2007.08.005.
- Duffy, J.D. (1998). The Shifting Paradigm of Epilepsy. *Psychiatric Comorbidity in Epilepsy*. (Ed: McConnell, H.W. & Snyder, P.J.). p.1-14. Washington, DC: American Psychiatric Press Inc.
- Dunn, D.W. & Austin, J.K. (2004). Differential diagnosis and treatment of psychiatric disorders in children and adolescents with epilepsy. *Epilepsy & Behavior*, 5(3), 10-17. doi:10.1016/j.yebeh.2004.06.011.
- Durualp, E. (2009). *A study on effects of play-based social skills training on social adaptation and skills of six-year-old preschool children: sample of çankırı*. Unpublished PhD thesis. Ankara University, Institute of Naturaland Applied Sciences, Ankara, Turkey.
- Fazlıoğlu, K., Hocaoğlu, Ç., & Sönmez, F.M. (2010). The effect of childhood epilepsy on family. *Current Approaches in Psychiatry*, 2(2), 190-205.
- Franks, R.P. (2003). Psychiatric issues of childhood seizure disorders. *Child and Adolescent Psychiatric Clinics of North America*, 12, 551-565.
- Günindi, N. (2008). *Examination of the relationship between social adaptation skills of six years old children ongoing pre-school education with empathy skills of their mothers and fathers*. Unpublished Master Thesis, Gazi University, Institute of Educational Sciences, Ankara, Turkey.
- Gürkan, K. (2007). Epilepsy and Child. *Biopsychosocial Approach to Childhood Diseases*. (Eds. Tüzün, DU. & Hergüner, S.) p. 189-210. Istanbul: Epsilon Publishing House.
- Güven, Y., Önder, A., Sevinç, M., Aydın, O., Uyanık Balat, G., Palut, B., Bilgin, H., Çağlak, S., & Dibek, E. (2006). *Comparison of the levels of social emotional adjustment of first-grade students with and without pre-school education*. I. International Preschool Education Congress Book, 2, 323-337.
- Hamiwka, L.D., Hamiwka, L.A., Sherman, E.M.S., & Wirrell, E. (2011). Social skills in children with epilepsy: How do they compare to healthy and chronic disease controls? *Epilepsy & Behavior*, 21(3), 238-241. doi: 10.1016/j.yebeh.2011.03.033.
- Hirfanoğlu, T., Serdaroğlu, A., Cansu, A., Soysal, A.S., Derle, E., & Gücüyener, K. (2009). Do knowledge of, perception of, and attitudes toward epilepsy affect the quality of life of Turkish children with epilepsy and their parents? *Epilepsy & Behavior*, 14(1), 71-77. doi: 10.1016/j.yebeh.2008.08.011
- Hupp, S.D.A., LeBlanc, M., Jewell, J.D., & Warness, E. (2009). History and overview. *Social behavior and skills in children*. (Ed. Matson, J.L.) p. 1-22. Newyork: Springer Science Business Media.

- Ibinga, E., Ngoungou, E.B., Olliac, B., Hounsossou, C.H., Dalmay, F., Mouangue, G., Atebo, S.J., Preux, P.M., & Duruet-Cabanac, M. (2015). Impact of epilepsy on children and parents in Gabon. *Epilepsy & Behaviour*, 44, 110-116. doi: 10.1016/j.yebeh.2014.12.035.
- Işık, M. (2007). *Adaptation and implementation of social adaptation and skills scale to five-six years old children ongoing kindergarten*. Unpublished Master's Thesis, Gazi University Institute of Educational Sciences, Ankara, Turkey.
- Jalava, M., Sillanpää, M., Camfield, C., & Camfield, P. (1997). Social adjustment and competence 35 years after onset of childhood epilepsy: A prospective controlled study. *Epilepsia*, 38(6), 708-15.
- Kariuki, S.M., Abubakar, A., Holding, P.A., Mung'ala-Odera, V., Chengo, E., Kihara, M., Neville, B.G., & Newton, C.R.J.C. (2012). Behavioral problems in children with epilepsy in rural Kenya. *Epilepsy & Behavior*, 23, 41-46. doi:10.1016/j.yebeh.2011.10.017
- Keene, D.L., Manion, I., Whiting, S., Belanger, E., Brennan, R., Jacob, P., & Humphreys, P. (2005). A survey of behavior problems in children with epilepsy. *Epilepsy & Behavior*, 6(4), 581-6. doi:10.1016/j.yebeh.2005.03.004.
- Meijer, S.A., Sinnema, G., Bijstra, J.O., Mellenbergh, G.J., & Wolters, W.H.G. (2000). Social functioning in children with a chronic illness. *Journal of Child Psychology and Psychiatry*, 41(3), 309-317.
- Mu, P.F., Kuo, H.C., & Chang, K.P. (2005). Boundary ambiguity, coping patterns and depression in mothers caring for children with epilepsy in Taiwan. *International Journal of Nurse Studies*, 42(3), 273-282. doi:10.1016/j.ijnurstu.2004.07.002.
- Onal, A.E., Tümerdem, Y., Öztürk, M.K., Gürses, C., Baykan, B., Gökyigit, A., & Özel, S. (2002). Epilepsy prevalence in a rural area in Istanbul. *Seizure*, 11, 397-401. doi:10.1053/seiz.2001.0665.
- Pellock J.M. (2004). Defining the problem: Psychiatric and behavioral comorbidity in children and adolescents with epilepsy. *Epilepsy & Behavior*, 5(3), 3-9. doi:10.1016/j.yebeh.2004.06.010.
- Pushpalata, B.D. & Chandra, K.S. (2009). Family: A predictor of social competence of preschoolers. *Studies on Home and Community Science*, 3(1), 63-66.
- Rantanen, K., Timonen, S., Hagström, K., Hamalainen, P., Eriksson, K., & Nieminen, P. (2009). Social competence of preschool children with epilepsy. *Epilepsy & Behavior*, 14(2), 338-343. doi:10.1016/j.yebeh.2008.10.022.
- Rantanen, K., Eriksson, K., & Nieminen, P. (2012). Social competence in children with epilepsy-a review. *Epilepsy & Behavior*, 24(3), 295-303. doi: 10.1016/j.yebeh.2012.04.117.
- Ronen, G.M., Streiner, D.L., Verhey, L.H., Lach, L., Boyle, M.H., Cunningham, C.E., & Rosenbaum, P.L. (2010). Disease characteristics and psychosocial factors: Explaining the expression of quality of life in

- childhood epilepsy. *Epilepsy & Behavior*, 18, 88-93. doi:10.1016/j.yebeh.2010.02.023.
- Şahin-Cankurtaran, E., Uluğ, B., & Saygı, S. (2004). Comorbid psychiatric disorders in epilepsy. *Bulletin of Clinical Psychopharmacology*, 14(2), 97-106.
- Schubert, R. (2005). Attention deficit disorder and epilepsy. *Pediatric Neurology*, 32(1), 1-10. doi:10.1016/j.pediatrneurol.2004.06.007.
- Seçer, Z., Çeliköz, N., & Yaşa, S. (2008). Attitudes of mothers of children attending pre-school education institutions, towards parenting. *Selcuk University Journal of the Institute of Social Sciences*, 19, 413-423.
- Serdaroğlu, A., Özkan, S., Aydın, K., Gücüyener, K., Tezcan, S., & Aycan, S. (2004). Prevalence of epilepsy in Turkish children between the ages of 0 and 16 years. *Journal of Child Neurology*, 19(4), 271-274. doi:10.1177/088307380401900406.
- Seven, S. (2008). Examination of the social skills of children aged seven or eight. *Firat University Journal of Social Sciences*, 18(2), 151-174.
- Soysal, A.Ş., Aydın, K., Okuyaz, Ç., Gücüyener, K., & Serdaroğlu, A. (2003). Neuropsychological effects of different types of epilepsy. *Journal of Psychiatry Psychology Psychopharmacology (3P)*, 11(1), 47-52.
- Thompson, P.J. & Upton, D. (1992). The impact of chronic epilepsy on the family. *Seizure*, 1(1), 43-48.
- Topalkara, K., Akyüz, A., Sümer, H., Bekar, D., Topaktaş, S., & Dener, S.A. (1999). Study on epilepsy prevalence in Sivas city centre performed with stratified sampling method. *Epilepsi*, 5, 24-9.
- Tse, E., Hamiwka, L., Sherman, E.M.S., & Wirrell, E. (2007). Social, skills problems in children with epilepsy: Prevalence, nature and predictors. *Epilepsy & Behavior*, 11(4), 499-505. doi:10.1016/j.yebeh.2007.08.008.
- Türkbay, T., Akın, R., & Söhmen, T. (2000). A comparative study inattentiveness, hyperactivity, impulsivity, self-esteem, depressive symptomatology, and behavioral problems in epileptic children. *Klinik Psikofarmakoloji Bulteni*, 10(1), 9-15.
- Wortham, S. (2005). Early childhood curriculum: *Developmental bases for learning and teaching* (4th Edition). Upper Saddle River, N.J: Meril an Imprint of Prentice Hall.