PERCEPTIONS OF QUALITY OF LIFE IN CHILDREN WITH LEARNING DISABILITIES

Thesis submitted to the
Institute for Graduate Studies in the Social Sciences
in partial fulfillment of the requirements for the degree of

Master of Arts
in
Educational Sciences

by
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Boğaziçi University
2011

Perceptions of Quality of Life in Children With Learning Disabilities

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June 2011

Thesis Abstract

Halis Sakız, "Perceptions of Quality of Life in Children with Learning Disabilities "

This study investigated the difference between children with LD (LD) and children with NLD (NLD) in terms of their perceived quality of life. LD and NLD children matched in terms of age, gender, income level and GPA. Children were selected purposefully ranging from ages 8 to 15 (N=240).

Children's perceived quality of life was measured by the Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Revised Version (KINDL-R) Turkish Form. Mother's perceived quality of life, who had children with LD, was measured by World Health Organization (WHO) Quality of Life Assessment (WHOQOL-BREF) Turkish Form. In addition, Learning Disabilities Screening Measure was used to gather data from classroom teachers about children with LD.

The results of the study showed a statistically significant difference between self-perceived total quality of life of children with LD (M=53.2, SD=12.9) and quality of life of children with NLD (M= 71.7, SD=15.8). Parents of children with LD also perceived their children with significantly lower quality of life (M=56.8, SD=13.3) than parents of children with NLD (M=65.6, SD=14.9). Similarly, teachers of children with LD assigned lower quality of life scores (M=43.4, SD=8.4) than teachers of children without NLD (M=60.8, SD=13.9). When the relationship between quality of life scores of children with LD and their mothers' quality of life was analyzed, a positive and statistically significant relationship was found ($r=.44$, $p<.001$).

Tez Özeti

Halis Sakız, "Öğrenme Güçlüğü olan Çocuklarda Algılanan Yaşam Kalitesi"

Bu çalışma, öğrenme güçlüğü olan ve böyle bir tanı almamış çocukların algılanan yaşam kalitesi açısından aralarındaki farkı incelemektedir. Öğrenme güçlüğü olan ve olmayan çocuklar, yaş, cinsiyet, gelir durumu ve başarı durumları açısından eşleştirilmiştir. Çalışmadaki tüm çocuklar, 8-15 yaş grubu içinden ve amaçsal yöntemle seçilmiştir (N=240).

Çocukların algılanan yaşam kalitesi, Çocuklar İçin Yaşam Kalitesi Ölçeği (KINDL-R) Türkçe Formu ile ölçülmüştür. Öğrenme güçlüğü olan çocukların annelerinin algılanan yaşam kalitesi, Dünya Sağlık Örgütü Yaşam Kalitesi Ölçeği (WHOQOL-BREF) Türkçe Formu ile ölçülmüştür. Bunun yanında öğrenme güçlüğü olan çocukların öğretmenlerinden öğrencileri hakkında veri toplamak için Öğrenme Bozukluğu Belirti Tarama Testi kullanılmıştır.

Araştırma sonuçları, öğrenme güçlüğü olan (ort=53.2, ss=12.9) ve olmayan (ort= 71.7, ss=15.8) çocukların kendi algıladıkları yaşam kaliteleri arasında istatistiksel olarak önemli fark göstermektedir. Öğrenme güçlüğü olan çocukların ebeveynleri, çocuklarının yaşam kalitesini (ort=56.8, ss=13.3) öğrenme güçlüğü olmayan çocukların ebeveynlerinin kendi çocuklarını değerlendirmesine göre (ort=65.6, ss=14.9) daha düşük algılamıştır. Benzer şekilde, öğrenme güçlüğü olan çocukların öğretmenleri, öğrencilerinin yaşam kalitesini (ort=43.4, ss=8.4), öğrenme güçlüğü olmayan çocukların öğretmenlerinin öğrencilerini değerlendirmesine göre (ort=60.8, ss=13.9) daha düşük değerlendirmişlerdir. Öğrenme güçlüğü olan çocukların ve annelerinin yaşam kalitesi değerlendirildiğinde, olumlu ve istatistiki olarak anlamlı bir ilişki bulunmuştur ($r=.44$, $p<.001$).

Acknowledgements

No success can be reached easily. As a result of two years of hard work, this thesis is now accomplished. After this accomplishment, I feel obliged to express my eternal thanks to Assist. Prof. Hande Sart, who has been giving her advices to me for over eight years. She has not only been my thesis advisor, but also a friendly teacher.

Also, I want to thank my committee members: Prof. Dr. Barış Korkmaz, for his valuable contributions to the thesis. Dr. Ayşe Caner always encouraged me with her belief in my potential as well as her smiling face. Dr. Bengü Börkan taught me a lot about statistics gave useful comments and was always available to help. I also want to thank you Assist. Prof. Nalan Babür for her perfectionist support in both the content and form of my study.

During the process of preparation of my thesis, there were some people who helped and witnessed me. Eren Aydın, my principal at work and Osman Karadeniz, my colleague, were always encouraging and friendly to me.

My best friends whom I know they are happy as long as I am so: İsmail, Ömer, Kadir, Fatih, Nizamettin, Başkan, Ast, Ssö, Enes, İbrahim. Thank you all.

Lastly, my family is the most important value for me. I cannot compare their value with anything. My mother whose prayer always opened all the ways for me, my father, my dear sisters and brothers (including Ugur who is closer than a brother to me) are invaluable elements of my life.

My dear nephews' presence is a reason for my life satisfaction. When Yusuf and Yakup smile I became the happiest in the world. The meaning of their presence to me is something that I cannot tell but only feel.

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CHAPTER 1
INTRODUCTION

Learning is a lifelong process of acquiring new knowledge, skills and behavior. Learning disability (LD) usually poses a difficulty on the individual to succeed in acquisition of the knowledge, skills and behavior (Torgesen & Wong, 1986). Learning disabilities affect the psychological adjustment and well-being of children by leading to significant decrease in the school achievement and some adaptation and behavior problems (Korkmazlar, 1999). Studies have shown that individuals with LD usually have problems in the process of acquiring knowledge necessary for understanding and using spoken and written language (Fletcher, Foorman, Boudousquie, Barnes, Schatschneider & Francis, 2002, Mendlowicz & Stein, 2000). Learning disabilities negatively affect listening, speaking, reading, writing, focusing, arithmetic, reasoning, motor and organization skills of the individual (Silver, 1989). Since it is a structural problem (Gaddes, 1985) learning disabilities is made up of a compilation of some difficulties accompanying people mostly in learning situations (Torgesen & Wong, 1986). As well as academic functioning, these difficulties influence vocational experiences, social relationships, participation in daily activities and emotional well-being of individuals with LD (Turkish Ministy of National Education, 2008).

Starting in the 1880s, learning disability was a concept emerging in a parallel but different understanding in the fields of neurology, education and psychology (Broca, 1861; cited in Goldstein & Mather, 2001). Word blindness was the terms which first appeared when people with aphasia started to lose their reading abilities (Kussmaul, 1877; cited in Goldstein & Mather, 2001). In the

same year, the term dyslexia was observable in a German monograph (Kussmaul, 1877; cited in Goldstein & Mather, 2001). However, in the last fifty years, the first attempt to define learning disability was taken by Kirk (1962), stating that:

> Learning disability refers to retardation, disorder, or delayed development in one or more of the processes of speech, language, reading, writing, arithmetic, or other school subjects resulting from a psychological handicap caused by possible cerebral dysfunction and/or emotional or behavioral disturbances. It is not the result of mental retardation, sensory deprivation, or cultural or instructional factors (Kirk & Bateman, 1962/1963, p. 73).

The definition offered by Bateman (1965; cited in Kavale & Forness, 2000), following the definition of Kirk (1962/1963) introduced and emphasized underachievement as a fundamental component of LD. The definition is as follows:

> Children who have learning disorders are those who manifest an educationally significant discrepancy between their estimated intellectual potential and actual level of performance related to basic disorders in the learning process, which may or may not be accompanied by demonstrable central nervous system dysfunction, and which are not secondary to generalized mental retardation, educational or cultural deprivation, severe emotional disturbance, or sensory loss.

Definitions of Kirk and Bateman were elaborated by several professional organizations and studies. Many of these definitions added the social skills problems as potentially resulting from learning disabilities. In addition, economic, social and emotional situation of the individual were evaluated as contributor factors to the emergence of learning disabilities even though learning disabilities were not the direct result of these influences (Hammill, Leigh, McNutt & Larsen, 1981).

The educational definition which has finally developed after several attempts to make a definition of learning disabilities goes beyond the simple descriptive analysis of the characteristics of children with LD. The definition

suggests that there are approaches and principles in special education which can decrease the discrepancy between the functioning and aptitude observed in children with LD (Kavale & Forness, 2000). Learning disability refers to one or more significant deficits in essential learning processes requiring special education techniques for remediation so if special approaches and interventions are applied, following appropriate and accurate diagnosis, it can be assumed that the child learns in a more normal manner (Kavale & Forness, 2000).

The way how children perceive their quality of life is very important because this perception will accelerate healthy development of children (Toposki, Edwards, Patrick, Varley, Way & Buesching, 2004). Quality of life is a sum of interacting several objective and subjective dimensions and there is always an interaction between each other (Higginson, Carr, Robinson & Peter, 2003). The World Health Organization Quality of Life Group (1998, p.551) defined quality of life as:

> An individual's perception of his/her state in life within the context of culture and value systems which surround him/her with respect to goals, expectations and life conditions. Quality of life is a broad-ranging concept affected in a complex way by the person's physical health, psychological state, and level of independence, social relationships, and their relationships to salient features of their environment.

Quality is a degree of well-being and quality of life is a general concept which includes personal well-being, beyond personal health status (Higginson et al., 2003). Quality of life is multidimensional and its dimensions influence each other as well as the total quality of life (Addington & Kalra, 2003). The measurement of subjective or perceived quality of life is a key to understand the subjective dimension of the quality of life of an individual. Evans and his colleagues (1985) recommended to analyze life quality in terms of subjective and

objective dimensions. They suggested that the objective signifier of life quality is the physical well-being whereas the subjective signifiers of the life quality are emotional well-being, psychological well-being and life satisfaction. In summary, quality of life is a result of the combination of interacting objective and subjective dimensions of an individual. Higginson et al. (2003) stated that quality of life is not a static concept; because values and self-perceptions of an individual are bound to change over time as a result of life and health events and experiences. Each dimension of quality of life can also influence other dimensions. For example, participation in social activities may strengthen feelings of emotional wellbeing, but participation in social activities is also partly dependent upon maintaining health and possessing the financial power to do it. Similarly, maintaining health and possessing financial power can be affected by the ability for social movement, housing conditions, social facilities, and personal and social relationships.

Based on the statements, it can be argued that not only school skills of students with LD are influenced by the disability but also his or her way of perceiving quality of life, specifically his or her social, emotional and psychological states are also affected by the disability. With the usage of quality of life measures in the psychological and mental health evaluations; it has become possible to assess several domains of life quality (Mendlowicz & Stein, 2000). By assessing their quality of life, it is easier to understand the functioning of children with LD in several dimensions of life as well as follow to their healthy development which might be jeopardized by a learning disability.

Purpose of the Study

Kirk, Senf and Larsen (1981) asserted that learning disabilities are characterized by severe differences between school skills and IQ. However, not only school skills but also social and emotional problems have been found to influence children with LD (Karande & Kulkarni, 2005). School is an important element in the system surrounding the child. Similarly, difficulties experienced by children with LD in other dimensions (such as family and friends) should be considered as well. Therefore, the current study analyzes perceived quality of life of children with LD by taking into account the interacting dimensions in their lives.

The purpose of the current study is to understand the influence of having learning disability on the life of children, more specifically, the way how these children with LD perceive their quality of life compared to children without LD. As far as the perceived quality of life is concerned, this study analyzes six different dimensions that define perceived quality of life. These dimensions are emotional well-being, self-esteem, physical well-being, family, friends, and school. The analysis of these dimensions reveals a result about whether there is a difference between children with LD and children without LD in terms of how they perceive their quality of life.

As Ellis and Hirsch stated (2000) mothers of children with disabilities are primary caregivers for their children. As they try to look after their children and meet their needs in life, they also affect and are affected by the disability their children have. Therefore, mothers of children with LD were included in this study. As well as trying to understand the characteristics of children with LD, the study is expected to give an idea about their mothers' quality of life. Understanding the

perceptions of mothers about the quality of life of their children and their own quality of life will be important is another aim in this study.

Significance of the Study

This study was meant to offer a contribution to understand the characteristics of children with LD as well as revealing the areas in which they encounter the most serious difficulties.

Learning disability has been a broad area of research on which a big number of studies have been conducted (Mendlowicz & Stein, 2000). However, According to Davis, Nida, Zlomke and Nebel (2008) quality of life of children with LD has rarely been investigated in the literature and the number of studies about the quality of life of children with LD have been limited (Karande & Kulkarni, 2009). Therefore, there is a need to increase the research base about the different living conditions and quality of life dimensions of children with LD. Learning disability has been defined by several researchers (Swanson et al., 2003).

Some of the definitions focus on the achievement-intelligence where as others consider different factors such as intraindividual differences, socio-emotional conditions or problems with psychological processing. The proposed research evaluates children with LD both in terms of school skills and their functioning in their family and with friends as well as taking their psychological well-being into consideration.

Research Variables

For the proposed study, there are some variables. The main independent variable is having a learning disability diagnosed by a state hospital and the guidance and research center (GRC) in those particular districts which are selected according to several criteria. The dependent variable is the perceived quality of life of the children with LD.

Research Questions

1. What are the characteristics of primary school children with LD compared to children with NLD?
    a. What is the difference between perceived quality of life of children with LD and children with NLD?
    b. What is the difference between the total perceived quality of life scores of children with and without learning disabilities in terms of demographic variables?
    c. What is the evaluation of classroom teachers of their students with LD measured by Learning Disabilities Screening Measure?
2. What is the relationship among the perceptions of children (with LD and with NLD) and the perceptions of their parents and teachers with respect to children's perceived quality of life?
3. What is the relationship between perceived quality of life of children with LD and the perceived quality of life of their mothers?

CHAPTER 2

LITERATURE REVIEW

Definitions of Learning Disabilities

The LD field has been for some time in a state of flux, as even some of the most fundamental questions about the disability remain in uncertainty. For example, questions such as how to best theoretically conceptualize LD, how to best operationally define it, and what cognitive processes are responsible for the LD are partly unanswered. This investigation will address some of these issues. To put these issues into context, I first explain how definitions have been shaped throughout history by different organizations and models.

For over 30 years, learning disability has been defined by professional organizations.

The 1975 Education for All Handicapped Children Act defined specific learning disability as:

> A disorder in one or more of the basic psychological processes involved in understanding or using language, spoken or written, in which the disorder may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, mental retardation, emotional disturbances, or environmental, cultural, or economic disadvantage (cited in Sart, 1999).

Interagency Committee on Learning Disabilities (ICLD) defined learning disabilities (1987) as:

> A generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities, or social skills. These disorders are intrinsic to the individual and presumed to be due to central nervous system dysfunction. Even though a learning disability may occur concomitantly with other handicapping conditions (e.g. sensory impairment,

mental retardation, social and emotional disturbance), with socio-environmental influences (e.g. cultural differences, insufficient/inappropriate instruction, psychogenic factors), and especially with attention deficit disorder, all of which may cause learning problems. A learning disability is not the direct result of those conditions or influences (ICLD, 1987; cited in Sart, 1999).

In 1988, The National Joint Committee for Learning Disabilities-NJCLD (1988) stated that:

Learning disability is a generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. These disorders are intrinsic to the individual and presumed to be due to central nervous system dysfunction. Even though a learning disability may occur concomitantly with other handicapping conditions (e.g. sensory impairment, mental retardation, social and emotional disturbance) or environmental influences (e.g. cultural differences, insufficient/inappropriate instruction, psychogenic factors), it is not the direct result of those conditions or influences.

Association for Children and Adults with LD (ACLD) defined specific learning disability as:

A chronic condition of presumed neurological origin which selectively interferes with the development, integration, and/or demonstration of verbal and/or non-verbal abilities. Specific learning disability exists as a distinct handicapping condition in the presence of average to superior intelligence, adequate sensory motor systems, and adequate learning opportunities. The condition varies in its manifestations and in degree of severity. Throughout life the condition can affect self-esteem, education, vocation, socialization and/or daily activities (ACLD, 1997; cited in Sart, 1999).

Legislation entitled the Individuals with Disabilities Act (IDEA 97). was designed to protect the basic rights of individuals with disabilities and to ensure free, appropriate public education for all children with disabilities. Since then, it has served as the rights for children and families affected by LD. IDEA 97 does not make any reference to psychological processes but requires a severe discrepancy between achievement and intellectual ability in one or more of the following: oral expression, written expression, listening comprehension,

mathematics calculation, mathematics reasoning, basic reading skill, or reading comprehension. However, in 2004, a new legislation entitled IDEA 04 was passed in the United States as an amendment to IDEA 97. IDEA 04 provides a conceptualization of LD that maintains key elements found in IDEA 97 but does not include the provision requiring a severe discrepancy between intellectual ability and achievement. Under IDEA 97, a child could not be identified as having LD without an IQ-achievement discrepancy. IDEA 04 requires that both a team of professionals and the child's parents make the LD diagnosis. Although not entirely eliminated, this piece of legislations places less emphasis on discrepancy analysis as a means of identifying LD (NCLD, 2009).

The Turkish Ministry of National Education, "MEB", (2008) defined learning disabilities as a psychological processing difficulty which emerges during the information processing of the brain. In the final report declaration, basic rights of children with LD for special education were ensured. The Turkish Ministry of National Education did not keep the definition of learning disabilities limited to spoken and written language and explained that a person with a learning disability, starting from the preschool years, might have problems in language, perception, motor coordination, memory, attention-concentration, sequencing, organization and social-emotional areas (2008).

Learning disabilities have been defined by some researchers as well as organizations (Mendlowicz & Stein, 2000; Shin, 1988). For example, Shin (1988) defined learning disability as a broad term which encompasses a range of disorders in reading, writing, and mathematics, listening and speaking. Mendlowicz and Stein (2000) stated that a learning disability is not a disorder

with a unique and definite cause and predictable symptoms. Problems in attention, emotion and social behavior may be experienced as a result of learning disabilities. Korkmazlar (1999) stated that learning disability is observed in individuals with intellectual functioning within normal range intelligence. These conditions affect listening, speaking, reading, writing, reasoning, organization, social perception and arithmetic skills.

Learning disability has been considered as a psychological processing problem by several researchers (Foorman, Boudousquie, Barnes, Schatschneider & Francis, 2002; Margai & Henry, 2003; Mendlowicz & Stein, 2000). For example, Mendlowicz and Stein, (2000) stated that learning disabilities influence people's abilities to process information, that is to interpret what they see and hear or to connect information from different parts of the brain. It is a disorder stemming from the problems in the information processing of the brain (Fletcher et al., 2002). Also, it was stated that learning disability is a classification which includes several disorders in which a person has difficulty in learning in a typical manner, usually caused by an unknown factor or factors. The unknown factor is the disorder that affects the brain's ability to receive and process information (Margai & Henry, 2003). While some researchers referred to the information processing aspect of learning disabilities, information processing of the brain was divided into four levels and explained in detail by some authorities (National Dissemination Center for Children with Disabilities, 2004; Turkish Ministry of National Education, 2008). The levels are explained.

Input level

It is the process in which the brain receives the information through senses. However, people with LD have difficulties in visual, auditory, tactile, kinesthetic and vestibular ways of perception of information.

Integration level

It is the period when the information transmitted to the brain is processed. This period is made up of three phases: sequencing, abstracting and organization. A person with LD may have problems in one or all of these phases.

Memory-storage level

The information transmitted to the brain is processed and stored in memory for further usage. A person with LD may have difficulties with short-term, long-term and working memory.

Output level

It is the process of sending the information by the brain to the cells, muscles and language as a message. The information acquired is expressed through speech, writing, drawing or body motions such as gestures and mimics. A person with a learning disability may have problems in one or all of these ways of expressing the information.

Learning disabilities have historically been diagnosed when achievement on standardized tests in reading, mathematics, or written expression is substantially lower than expected for age, schooling, and level of intelligence (American Psychiatric Association, 2000). Since then, learning disabilities have mostly been considered to affect children's school skills. However, learning disabilities might also be thought as a life-long situation which affects life-long conditions and dimensions (Shin, 1998). These conditions are usually related with work life,

daily routines and social interactions. Although it differs among people, these difficulties constitute the common daily experiences of many children, adolescents and adults with LD. A person with a learning disability may experience a cycle of academic failure as well as problems in psychological adjustment such as self-esteem. As a result, a high sense of frustration is usually experienced by these individuals due to the difference between them and their peers in terms of academic and social skills (Shin, 1998).

Models of Learning Disabilities

There are some models that explain LD. The most current and controversial issue facing the LD field is the convenience of the IQ-achievement discrepancy model. A growing number of researchers have started to call for leaving this method of identification (Joshi, 2003; Stanovich, 1999; Sternberg & Grigorenko, 2002). As such, a number of alternative conceptualizations have also emerged instead of traditional methods (Mellard et. al, 2004). Some of these approaches include identification based on responsiveness to intervention, non-categorical or low achievement based identification, and identification based on psychological processes (Klassen, Neufeld, & Munro, 2005).

The Aptitude-Achievement Discrepancy Model

Learning disability has traditionally been explained by The Aptitude-Achievement Discrepancy Model (Goldstein & Mather, 2001; Swanson, Harris & Graham, 2003). The Aptitude-Achievement Discrepancy Model necessitates a discrepancy between predicted and actual school performance. The current state of the child with respect to achievement is lower than the expected achievement level because children normal in IQ are expected to perform better at school (Mather & Healey, 1990). This model is common because it provides the opportunity to statistically

differentiate children with LD from their peers without disabilities so that children with LD are eligible to receive special education service (Goldstein & Mather, 2001). However, usage of the aptitude-achievement discrepancy model as the single way of defining and diagnosing learning disability has been criticized because reducing the diagnosis of a learning disability to a formula is considered to be invalid and too simplistic (Goldstein & Mather, 2001). Another point of criticism of the model is related to the difficulty to apply the model for preschool children. The model assumes that the performance of the child can be evaluated after the first grade and it is often difficult to diagnose a child before he/she is at the third grade. However, preschool children might also have learning disability. As a result, children with a learning disability who are not diagnosed until primary years may suffer from social, behavioral and emotional problems (Mather & Healey, 1990).

As the aptitude-achievement discrepancy model assumes, learning disabilities which usually negatively affect learning to efficiently read, write or do mathematical calculations are represented by severe discrepancy between IQ and school skills (Karande & Kulkarni, 2009). As a result, individuals with LD are often characterized with psychological processing problems and the discrepancy between ability and achievement. These limitations may be reflected on many ways such as specific difficulties with spoken and written language, coordination, self-comparison, or attention (Karande & Kulkarni, 2009). Such difficulties extend to schoolwork and can hinder learning to read or write, or to do math. However, learning disability is also related with the psychosocial and emotional state of the child (Mather & Healey, 1990). Therefore, it has been started to be

argued that the definition which explains learning disabilities only within the school boundaries is too simplistic because learning disabilities should have a broader definition which encompasses psychosocial and emotional issues as well as focusing on educational problems (Torgesen & Wong, 1986). Learning disabilities can prevail and be reflected on lifelong conditions that, in some cases, influence many parts of a person's life: school or work, daily routines, family life, and sometimes even friendships and play. This new perspective has opened the way of analyzing learning disabilities in a way that research will focus not only on the educational achievement and the specific intelligence measurements but also on different aspects of life of a person or a child with a learning disability (Mendlowicz & Stein, 2000). In addition to the intelligence scales and performance tables which were used to diagnose the classical IQ and achievement discrepancy, some other psychometric scales have also started to be used in the field to understand different aspects of lives of children with LD (Mendlowicz & Stein, 2000).

Intraindividual Differences Model

Intraindividual Differences Model emerged as an alternative to the aptitude-achievement discrepancy model, stating that expecting the child to show poor performance is unnecessary. NCLD and the Office of Special Education Programs (2002) stated that while IQ tests do not exactly measure a student's responses to instruction, measures of neuropsychological functioning and information processing should be included in the evaluation process to analyze the services needed for the particular student. In addition, observable symptoms must be understood and analyzed successively (Mather & Healey, 1990; Swanson et al.,

2003). This model focuses on the ability differences and symptoms each particular child possesses. This model does not ignore the importance of the role of aptitude-achievement discrepancy model as a signifier for discrepancy and unexpected underachievement. However, it opposes to the usage of that model as the main signifier of a learning disability. The intraindividual differences model asserts that individuals with LD possess strengths as well as weaknesses in some core areas that lead to underachievement (Swanson et al., 2003). However, Reschly and Tilley stated that (1999) the intraindividual differences model does not place enough emphasis on the classroom performance of the individual.

Although there are various differences in the definitions and models of learning disability, there are also some common points in these definitions. The first point is that individuals with LD are not mentally or visually retarded. Another common point is that there are significant differences between the intelligence of the individual and the achievement level.

Subtypes of Learning Disabilities

Learning Disabilities is a group of disorders which are divided into four categories according to the classification of DSM-IV (1994). These categories are listed.

Reading Disorder (Dyslexia)

For individuals with a reading disorder, reading skills are weaker than general ability. Reading disorder is seen among 3 to 10 percent of the whole school population. People with reading disabilities have difficulty in recognizing letters and pronouncing words. As a result, they generally read incorrectly, they read very slowly or have very limited vocabulary. Phonological awareness which is the

ability to divide words into letters plays the central role in reading problems. Lonigan, Burgess and Anthony (2000) conducted a research in a preschool setting and found that preschoolers who had problems with phonological awareness had the risks for potential learning disabilities.

Disorder of Written Expression (Dysgraphia)

For individuals with a writing disorder, writing skills are weaker than general ability. It can influence the quality of written expression, spelling, writing speed and legibility, and/or writing syntax. Children with writing disorders have difficulty in doing their homework. In comparison to the effort they spend, the product they gain is usually not that well-prepared because they come up with a bad writing. Some children may miss letters while writing whereas some of them have problems in organizing the writing. The visual-motor coordination of children with writing disabilities is not as good as those who do not possess any kind of learning disability.

Mathematics Disorder (Dyscalculia)

For individuals with a mathematics disorder Calculation skills are weaker than general ability. Difficulty in reading numbers correctly, performing subtraction and addition calculations, understanding the symbols existing in mathematics and visual-spatial difficulty characterize mathematics disorders. Lerner (1985) stated that children with mathematics disorder have difficulty in situations which necessitate visual-motor and visual-perception. In addition, some other children have problems with perceiving geometrical shapes and copying them.

Learning Disorder, Not Otherwise Specified

It can be diagnosed when there is a mild deficit in two or three of the areas listed

above (reading, writing, and math) that individually fall short of diagnostic criteria, but together can be considered as a significant impairment. Among these categories, reading disability is the one which has attracted the most attention and more studies have been conducted about this type than other types of learning disability (Batum, 2007). One reason of this situation is that the difficulty experienced in reading leads to other kinds of difficulties. For example, a student with a reading disability will not be able to comprehend a mathematical problem presented literally. Therefore, it is possible to state that although learning disabilities are categorized, they are generally encountered together (Wicks, Nelson & Israel, 2003).

Among the different subcategories of learning disabilities, reading disorder (dyslexia) has attracted the biggest attention in the literature. One of the reasons for this is that reading disorder creates problem in other areas as well. (Dockrell & McShane, 1993). For example, a student who cannot read at the second grade may be unable to comprehend a mathematical problem as well. Therefore, although learning disabilities are divided into different subcategories, the comorbidity of one or more of these categories is usually possible (Ackerman, Anhalt & Dykman, 1986).

While learning disabilities might be evaluated in the above mentioned four categories, Shin (1998) divided learning disabilities into three broad categories: Developmental speech and language disorders, academic skills disorders, and other, a catch-all which includes certain coordination problems and learning difficulties not covered by other terms. Firstly, developmental speech and language disorders include developmental articulation disorder, developmental

expressive language disorder and developmental receptive language disorder. It is stated that speech and language problems are usually the early indicators of a learning disability. People with developmental speech and language disorders have problems in speech sounds, using spoken language to communicate or understanding what other people say. Next, academic skills disorders encompass developmental reading disorder, developmental writing disorder and developmental arithmetic disorder. Students with academic skills disorders are often years behind their classmates in developmental reading, writing and arithmetic skills. Lastly, other learning disabilities include coordination disorders that can lead to spelling, attention and memory disorders (Shin, 1998).

Characteristics of Individuals with LD

In International Classification of Disorders (ICD)-10 (2006), some characteristics of children with LD have been illustrated. It is stated that deficits in any area of information processing can manifest in a variety of specific learning disabilities. It is possible for an individual to have more than one of these difficulties. Children with reading disorder have difficulty in accurate or fluent word recognition, word decoding, reading rate, prosody (oral reading with expression) and reading comprehension. Other indicators of a reading disability are the difficulty in phonemic awareness (the ability to break up words into their component sounds), and difficulty in matching letter combinations to specific sounds. Children who have difficulty in writing have impaired written language ability as well as problems in hand writing, organization of ideas and composition. Math difficulty is another important area which children with LD face. Children with math disability may have difficulty in learning math concepts (such as quantity, place

value and time), memorizing math facts, organizing numbers and how problems are organized on the page.

The Turkish Ministry of National Education also (2008) presented the domains in which individuals with LD have problems and described their characteristics:

Language

In learning disabilities, there are problems in processing and differentiating the auditory information. This is one of the reasons of reading difficulty. In addition, it is possible to observe the delay in expressive language and vocabulary development. People with LD encounter difficulties in finding an appropriate word to state, naming the objects, sequencing the order of the sounds, remembering the vocabulary which was perceived before. In addition, these people make reading mistakes, read slower than their peers and avoid reading with a loud volume. When it comes to written language, people with LD make sequencing mistakes in writing and have problems in writing the same word again.

Perception

Problems of people with LD in terms of perception are matching similarities or differences, classifying a subject with respect to dimensions, colors and shapes, sequencing, comprehending the orders, mixing the information, inability in grouping and spatial arrangement and mixing the directions. People with LD experience visual and auditory perception problems (differentiating, figuring and memory), tactile perception problems (difficulty in recognizing by touching), and kinesthetic perception problems (dancing, spatial perception and positioning

problems).

Motor coordination

Beside language and perception problems, people with LD experience difficulties in fine motor skills, vestibular system and gross motor skills. They have delays in hand-preference; have difficulty in proper grasping of the pencil and drawing geometrical shapes. Coordination problems include difficulties in rhythmic movements, going up or down the stairs, jumping, cycling and playing with a ball. Individual with LD are mostly clumsy and they are more prone to make accidents.

Memory

The information perceived through the senses is coded, processed, and stored in the memory for further usage. People with LD have problems in short-term, long-term and working memory. They have difficulties in recalling the repeated daily activities (washing hands before meal), days, months, numbers and the sequence of the alphabet, poems, songs and names of the people around them. It may be difficult for them to recall and comment on newly learned items. They often lose or forget their belongings.

Attention-Concentration Skills

Attention deficit may lead to problems in perception or the attention may be distracted if there is a problem with perception. In order for a person to react to an outside stimulus he or she should pay attention to that stimulus. People with LD have difficulties in listening to and following verbal directives. Their attention span is usually short and it may be difficult for them to focus.

Sequencing-Organization Skills

People with LD may have difficulty in recalling the sequence of ordered items, days, months, seasons, numbers and alphabet letters. They may have difficulty in organizing a drawing, writing or verbalizing an idea. Furthermore, it may be difficult for them to start, complete and carry out a task, to plan their homework and projects, to comparison their tasks and to organize their ideas and present them in a sequence.

Social-Emotional Skills

People with LD may have difficulties in their social relationships and emotional well-being. Making new friends, maintaining their relationships, adapting to changes may be a common problem for them. Difficulty in perception of social cues, gestures and mimics may lead to another difficulty in managing their emotions.

According to Turkish Ministry of National Education (2008) individuals with LD may lack the skills for cognitive strategies development necessary for learning. However, all individuals with LD may not have all the symptoms at one time or may experience them in different levels. To add, there are some areas in which they are interested and are successful. For example, they are curious about their environment and they may comprehend better and understand in this environment. They can think through pictures instead of words. They can have developed cognitions and mental problem solving skills instead of paper-pencil strategies. They can be creative and they can develop practical solutions for problems. For example, they can understand how a machine works in a very short time instead of reading the manual. Therefore, it is not surprising to observe them

making inventions.

Korkmazlar (1999) also stated some of the most common characteristics of children with LD:

1. Their IQ scores are within or above the normal range,
2. Their attention span is too short,
3. They have weaker visual-motor coordination,
4. They have problems with visual perception,
5. They have problems in organization and effective usage of time,
6. They have difficulty in telling the time and finding directions,
7. They have social and emotional behavioral problems. They might have problems with their school friends and in getting on with them well.
8. They do not possess high academic school skills. They have problems in reading and writing. They might read very slowly and incorrectly. In mathematics, they mix the symbols and cannot perform calculations easily.

Gender Differences in Learning Disability

Learning disabilities are observed with males 4 to 6 times more than females. (Batum, 2007; Korkmazlar, 1993). Kavale and Reese (1992) stated that in the whole LD sample they had in their study, males constituted 70 per cent and females made up 30 per cent of the sample. Similarly, other researchers also came up with the result that reading disability is common among males 3 times more than females (Badian, 1999; DeFries, 1989). However, some researchers have come up with different results as far as mathematical disability was concerned and they reported equal rates for males and females who had mathematical disability

(Lewis, Hitch & Walker, 1994; Shalev, 2004). However, this situation is still being debated whether these findings are valid for the whole population and what the exact factors of this situation are (Batum, 2007). There are some possible reasons to explain why more male students are diagnosed with LD although they are not shown. Some researchers argue that male students are more easily perceived and selected by their teachers or parents and female students are generally more inactive (Badian, 1999; Vogel, 1990). However, there are some other opinions which state that learning disabilities are more common among males because of differences in the brain structure. This hypothesis states that the asymmetrical structure which must exist in the right and left hemispheres of the temporal lobe is not present in the male brain structure therefore learning disabilities are observed more in males than females (Batum, 2007).

It has always been difficult to learn the percentage of people with LD within the whole population due to methodological reasons. The main reason for this is the difficulty in assessing, categorizing therefore diagnosing the disabilities (Kavale and Forness, 1995). Although the exact number is not known, it is predicted that 5-10% of the general world population is made up of people with LD. In Turkey, 10-20% of the school children are diagnosed with a kind of learning disability (Batum, 2007).

Etiology of Learning Disabilities

Although the exact percentage of the frequency of the learning disability within the general population is not known, a percentage of 5 percent to 10 percent was elaborated (Greenblatt & Greenblatt, 1997; Kronenberger & Dunn, 2003). Kavala and Forness (1995) stated that the difficulty in defining and

classifying learning disabilities as well as the methodological difficulties make it difficult to diagnose the learning disability. In Turkey, between 10 percent and 20 percent of the school children are diagnosed with a learning disability (Erden, Kurdoğlu & Gündoğdu, 1998). Although there are different opinions about the etiology of learning disabilities, some factors have been defined as leading to learning disabilities.

Problems in neurological functions

The learning process is made up of four levels and a difficulty in this process of learning acquisition may lead to a learning disability (MEB, 2008; Silver, 1989). A difficulty in the input, processing, storage and output levels may lead to an inability to fully learn the information. Individuals with LD have problems in self-expression and motor skills (Korkmazlar, 1992).

Brain abnormalities

The causes of learning disability are numerous and can be attributed to either genetic or environmental factors affecting neurodevelopment (Rauch, Hoyer, Guth, 2006). However, 40–80% of children with a learning disability have no identifiable cause (Roy & Roy, 2000). Central nervous system is quite delicate in that it might be negatively affected by factors before birth or after several months. Therefore, these factors may lead to deviations in the development and create developmental delays which might result in learning disabilities (Gilger & Kaplan, 2001; Korkmazlar, 1992). Collins and Rourke (2003) reported that the *anguler girus* area is exposed to developmental delay in individuals with reading disorder and the delay leads to connection between senses needed for reading and writing. Shalev (2004) also found that the left hemisphere plays an important role

in the mathematical disorder. The left frontal lobe is generally activated while performing mathematical calculations. However, in individuals with mathematical disorder, no activation took place doing mathematical calculations due to functional disorder in the brain. Helenius, Salmelin, Service and Connolly (1999) also found that the left superior temporal area is less activated in individuals with reading disorders while performing a reading exercise. Similarly, Pugh, Mencl, Jenner, Ren Lee, Katz, Frost and Shaywitz (2001) found out that in individuals with LD, the acquisition of verbal and nonverbal input is done in the same hemisphere instead of necessary lateralization occurrence.

Genetic factors

Genetic factors have been played a role in the emergence of learning disabilities. For example, in a meta-analysis conducted by Raskind (2001), it was found that about 70% of the individual differences in reading disabilities stemmed from genetic factors. However, Raskind also stated that (2001) genetic factors played a secondary role in the emergence of learning disabilities rather than specifically leading to a learning disability. Grigorenko (2001) stated that children whose parents were diagnosed with a reading disability tended to have a reading disability as compared children whose parents did not have any kind of learning disability. Similarly, parents of children with LD were more prone to have a learning disability.

Psychosocial factors

Psychosocial factors are considered important in influencing learning beside biological variables (Grigorenko, 2001). Psychosocial factors that are considered to affect learning most are social norms, social status, cultural values, parent-child

relationship and child growing behavior (Wick-Nelson & Israel, 2003). For example, in a study conducted by Wick-Nelson and Israel (2003) it was found that communication problems in parent-child relationship are factors which increase the probability of a learning disability.

Diagnosis of Learning Disabilities

Throughout history, the IQ-Achievement Discrepancy Model has been the fundamental base for diagnosing learning disabilities. Standard tests have been widely used for locating the gap between the actual aptitude and current performance of the individual. However, some alternative approaches have emerged in recent years such as identification based on responsiveness to intervention, non-categorical or low achievement based identification, and identification based on psychological processes (Klassen, Neufeld, & Munro, 2005). The overall objective is that detailed investigations of these processes will eventually lead to a way of directly diagnosing LD (Torgesen, 2001).

Learning disabilities may include psychiatric, psychological, cognitive and medical problems as well (Pugh et al., 2003). When it comes to the diagnosis of learning disabilities with respect to these problems, Korkmazlar (1999) stated that the percentage of correct diagnosis was between 6.6. to 16.7 percent of the children were found to be in the "normal" range in diagnosis and the remaining part of the children was misdiagnosed. Here a necessity emerges which requires a comprehensive assessment in the diagnostic procedure. Therefore, diagnosing a probable learning disabilities case requires medical and psychological evaluations together with careful psychiatric and family analysis. Medical evaluation must focus on searching whether there are any health problems which prevent effective learning of the individual. Psychiatric evaluation concentrates on whether there is

any psychopathology and the relationship between the particular psychopathology and learning disability (Korkmazlar, 1999). While conducting a psychological diagnosis, academic, cognitive and neuropsychological evaluations are important in this process. There are some psychometric instruments that can be used in this process such as intelligence tests, instruments measuring perceptual and visual-motor coordination. Lastly, while conducting family evaluation, parents' attitudes and behavior and relationship problems should also be taken into consideration (Korkmazlar, 1999).

Diagnosis Procedure in Turkey

Learning disabilities can be officially diagnosed in some institutions in Turkey. The first institution is the hospital, including state and university hospitals which operate as a branch of the Turkish Ministry of Health and diagnose LD in a medical perspective and provide a committee report as a result of the diagnosis. The second important institution is the guidance and research centers (GRC) known as "Rehberlik ve Arastirma Merkezi" or shortly RAM (Turkish) which operates as a branch of the Turkish Ministry of Education. The committee report provided by the hospital is necessary for almost all kinds of official applications. Based on this medical report, people might be eligible to receive social services, special education and can apply for employment. In order for people having the right to benefit from these services the percentage of the disability must be over a defined number. For example, a person whose disability percentage is over 50 might have the right to apply for financial aid or a person whose disability percentage is over 20 might apply for special education. Learning disabilities is a kind of disability diagnosed by hospitals with different but similar definitions.

“Özel Öğrenme Güçlüğü”, “Özgül Öğrenme Güçlüğü ” or “Öğrenme Güçlüğü” (Turkish) are some definitions given as a diagnosis. However, it is not a common case to see the type of learning disability such as dyslexia or dyscalculia in the diagnosis of LD. The percentage of pure learning disabilities is 20 which means people diagnosed with LD can benefit from special education.

The main function of guidance and research centers (GRC) in Turkey is to refer people who have special needs to institutions for special education. In addition, these centers provide an educational plan that must be followed by the special education center and the school of the individual where she/he is educated. Committee health report which diagnoses a particular disability whose percentage is over 20 is a precondition for receiving special education. However, applying with a valid health report does not necessitate that an individual will benefit from special education because the last decision is given by the GRC because an educational assessment is conducted there. When it comes to the LD cases, a common method is to administer an intelligence test and measure the school performance and skills of the individual. After an individual is diagnosed with an LD, he or she can benefit from learning disabilities support education program and he or she is usually sent to inclusive classrooms. Individualized education plan (IEP) is prepared for students with special needs who are referred to inclusive classrooms. IEP includes the current educational performance of the student as well as short and long term objectives which are defined as the student starts his/her schooling. The IEP is formatively evaluated at the end of each semester.

Quality of Life

Quality of life is a broad concept which provides a comprehensive framework for studying factors related to physical and psychological well-being of children and adolescents (Raphael, 1996).

Quality of life can be defined in various ways (Cantrill, 1965; Goode, 1990; Higginson et al., 2003). Goode (1990) states that quality of life is experienced when the basic needs of an individual are met and when an individual can follow life goals and achieve them. Dew and Huebner (1994) referred to quality of life as an individual's overall evaluation of his/her life conditions. Higginson et al. (2003) stated that quality of life is a domain which represents the functional effect of life conditions and their effect upon an individual, as perceived by him/her (Higginson et al. 2003) WHO also defined quality of life as a discrete element of life (1995). Quality of life is an issue that is relevant to individuals with any kind of living conditions. For example, Cantrill (1965) studied quality of life among people in more than a dozen nations at different stages of development and found individual differences in the perception of quality of life according to different living conditions.

Quity (2003) defined perceived quality of life as a multidimensional dynamic concept that emerged upon the necessity to estimate the psychosocial influences on the person which include economic welfare, health status, social and environmental characteristics. It is possible to attribute several concepts like well-being, life-satisfaction, health, disability and functioning to the term perceived quality of life. He also referred to the quality of life as the "aspects of life that make life particularly fulfilling and worthwhile" (Quity, 2003, p.407).

Quality of life has been subject to some research that led to either constructing new measuring methods or using the currently available life quality measures (Mendlowicz & Stein, 2000). As stated previously, quality indicates a subjective evaluation by the individual. Perceived quality of life is usually referred as patient assisted outcome measure, health status, and functional status. Sajid and Tonsi (2007) stated that quality of life and perceived quality of life are usually used interchangeably, often with little distinction between the two concepts. Key components of perceived quality of life are physical functions, sensations, self-care, dexterity, cognition, pain or discomfort, and emotional-psychological well-being. As a result, the term has been used in research for characterizing an individual's perceived quality of life from his or her own perspective.

Whereas objective measurements of quality of life require external societal conditions by the use of social indicators, psychological indicators provide a reach source of information about quality of life from a different perspective. Psychological indicators include measures of subjective well-being which assesses personal, internal judgments of psychological well-being and personal satisfaction (Schalock, 1990). In this aspect, quality of life can be quantified through assessments of subjective reactions to life experiences. Subjective well-being incorporates elements such as one's feelings, thoughts, attitudes, and satisfaction with life (Dew, 1996) and involves an evaluation about life experiences that include both a cognitive component and an affective component (Dew, 1996).

Shawaryn, Schiaffino and Johnston (2002) stated that general quality of

life can be influenced by many factors beyond the area of health care including financial status of the family and poor social conditions. They also asserted that although there are variations in the terminology and definitions of perceived quality of life, this construct includes four main broad categories: physical function, psychological function, social interaction and somatic sensation. They stated that there are some operational definitions of perceived quality of life characterizing it. Firstly, perceived quality of life is subjective. The second definition is that perceived quality of life represents the final output of the combination of all the psychological, physiological and social variables in a person's life. Third, it is important to note that perceived quality of life is multifactoral. As noted in the definition of it, perceived quality of life expresses the combination of functional domains and a person's experiences are evaluated in a way that all the domains are explored. The last point emphasized by Shawaryn et al. (2002) is that perceived quality of life is time variable which means that it fluctuates with time.

Quality of Life of Children with LD

Quality of life of children is influenced by their developmental level (Higginson, et al., 2003). Development is an observable change in children and it poses a difficulty for quality of life researchers because it usually unpredictable to decide whether this development influences quality of life or vice versa. Quality of life of a child generally is dependent upon financial, emotional and physical support as well as the autonomy gained from the parent. Similarly, the environment in which the child is in affects the physical, social and psychological functioning of the child. A factor, such as a disability or chronic illness can exacerbate this process

and lower the quality of life of children as well (Sajid & Tonsi, 2007).

Research on quality of life of individuals with LD has mostly focused on subjective individual perceptions of life quality and social and environmental variables which influence personal satisfaction and well-being (Reiter & Bendov, 1996). It has also been stated that individuals with LD do not perform as well as NLD peers with respect to school achievement, attainment of post education. Also, they have problems with motivation, lowered self-esteem and emotional difficulties (Peraino, 1992).

Many measures of quality of life are used simultaneously with adults and children. However, young people are not a heterogeneous group and their perceptions of quality of their lives change with their ages (Billingham, Abrams & Jones, 1999). Age specific and objective measures must be used in order to understand the quality of life of each particular child.

There have been some studies that examined the effect of several diagnosed disturbances/psychopathologies on the perceived quality of life of children with normal functioning. Wells, Stewart, Hays, Burnam, Rogers, and Daniels (1989) found out lowered level of perceived health, physical functioning, somatic complaints and role functioning among those with diagnosed disturbance and psychopathology in their study of 11.000 patients with depression. Schonfeld, Veboncoeur, Fifer, Lipschut, Lubeck, and Buesching (1997) also studied the perceived quality of life among people with untreated major depressive disorder or anxiety disorders. As a result of the study, perceived quality of life was affected mostly by major depressive disorder, followed by post-traumatic stress disorder and panic disorder. In addition to this result, the impact of several medical

conditions such as heart disease and diabetes was found to be less than the impact of untreated anxiety disorders (Schonfeld et al., 1997).

Learning disability has been an important area of study for psychologists and educators in recent decades (Mendlowicz & Stein, 2000). Because of its link with quality of life, researchers have found it especially fruitful to explore quality of life among school children. Research has examined life quality variously as a one-dimensional and a multi-dimensional phenomenon, an objective and subjective measure, an indicator of present and lifetime well-being, and a social and psychosocial phenomenon (Karande & Kulkarni, 2005).

While research has focused differently on learning disabilities and perceived quality of life, little has been known about the perceived quality of life of children with LD (Thompson, 2008). Research has shown that significant changes in the medical conditions of people or impairment associated with psychopathologies in individuals significantly affect the perceived quality of life of people (Gilbert & Soderstrom, 2003). One of the most comprehensive studies was conducted by Thompson (2008) with 68 students, 34 of whom reported having been diagnosed with a learning disability. The study checked the potential relationship between a learning disability and anxiety or sadness. As the main measurement tool, RAND 36-Item Health Survey was used and results indicated that those primary school students reporting learning disabilities suffered from an impaired sense of well-being associated with anxious and sad feelings. The results also suggested significant differences between male and female students for both emotional well-being and role limitations due to emotional problems. In addition, females were found to report significantly more anxiety and sadness than males

were. Further analysis did not suggest a significant interaction between gender and the presence of a self-reported learning disability. Individuals reported that having been diagnosed with a learning disability had significantly poorer emotional well-being.

Another study related with quality of life of children with LD was conducted by Karande, Kirankumar, Madhuri and Arpita. (2008). Researchers aimed at measuring the perceived quality of life of children with newly diagnosed specific learning disability using the Child-Health Questionnaire-Parent Dorm 50. The study was conducted with 138 Indian students and clinically significant deficits were detected in 9 out of 12 domains. These domains were limitations in family activities, emotional impact on parents, social limitations as a result of emotional-behavioral problems, time impact on parents, general behavior, physical functioning, and social limitations as a result of physical health, general health perceptions and mental health. In this study all the 12 domain scores and both the mean summary scores of the children were lower than the US children norms. Effect size results reflected clinically important deficits in the perceived quality of life of study children in three out of four psychosocial domains, namely: medium deficit in mental health and large deficits in emotions and behavior and general behavior.

Quality of life of Parents Having a Child with LD

Previous research suggests that once a child with disabilities is introduced into the family, the whole family life changes (Faerstein, 1981; Wilgosh, 1990). Feelings of shock, confusion, fright, anxiety, denial, grief, guilt, anger, and fear are very common in families of children with disabilities (Chang & McConkey, 2008;

Ferguson, 2002; Fitzpatrick & Dowling, 2007). Raising a child with special needs has negative effects on a family and can severely disrupt the normal process of family life (Chang & McConkey, 2008; Faerstein, 1981; Wilgosh, 1990). Parents of children with disabilities have higher levels of stress than parents of children without disabilities (Duis, summers, & Summers, 1997).

As with parents of children with special needs, parents of children with learning disabilities might suffer from its effects (Kenny & McGilloway, 2007; Chang & Hsu, 2007). Learning disabilities do not resemble some other obvious disabilities, such as blindness or deafness, which parents can easily become aware of treat earlier. It is a hidden disability; parents often may not be able to notice its symptoms until early grade school (Dyson, 1996; Faerstein, 1981). Learning disabilities create obvious difficulties when the child enters the later grades, which require a lot of writing, reading, spelling, comprehension, and math (Hallahan, Lloyd, Kuuffman, Weiss, & Martines, 2005).

Having a child with LD, because it is a hidden disability, makes it difficult for parents to understand their child‘s learning problems (Hallahan et al., 2005). As a result, guilt is a very common feeling that parents of children with LD experience (Hallahan et al., 2005). Stress level of parents of children with LD has been investigated in the literature (Dyson, 1996; Hallahan et al., 2005; Kazak & Marvin, 1984). Parents of children with LD are at higher risk for stress and other problems such as depression more than parents of children with NLD (Chang & McConkey, 2008). Helping children with LD is extremely time consuming for parents (Waggoner & Wilgosh, 1990). Therefore, Waggoner & Wilgosh (1990) stated that many studies have displayed that children with LD often cause a

significant negative impact on the family‘s relationships. As a result, parents of children with LD have lower levels of coherence, have more unresolved conflict, and they are at higher risk of emotional, physical, and social stress (Chang & Hsu, 2007). Families of children with LD have significantly poor social relationships (Karande & Kulkarni, 2009) and they demonstrate more worry about relationships within the family (Margalit & Heiman, 1988). LD parents have negative attitudes and low expectations toward their children‘s performance on academic tasks. Therefore they show frustration, disappointment, and more negative interactions with their children with (Chang & McConkey, 2008)

Having a disability brings about different hardness for children and their parents. In the literature there have been studies about quality of life of mothers who have children with disabilities (Bumin, Gunal & Tükel, 2008; Weigl, Rudolph, Eysholdt & Rosanowski, 2005). The most affected person in the family is usually the mother (Smith, Innocenti, Boyce & Smith 1993). Mothers have to undertake too much stress because they are alone with their children in their daily life. Not all mothers of children with disabilities have difficulties of adaptation even when they have to face stressful life situations (Ellis & Hirsch, 2000). However, it has been explained that children and mothers are at risk of stress-related problems when mothers are burdened by the demands of their children. In mothers of children with congenital heart disease, cancer and atopic dermatitis, the level of quality of life was found to be lower (Bumin et al., 2008). However, mothers of children with asthma, juvenile chronic arthritis and cleft palate findings indicated no influence on quality of life (Weigl et al., 2005). Specifically, Bumin et al. (2008) investigated the relationship between anxiety and depression

with quality of life in mothers with disabled children in Ankara, Turkey. One hundred and seven mothers of children with disabilities were included in the study and Beck Depression Inventory, State Trait Anxiety Inventory and Nottingham Health Profile were used to assess depression, anxiety and quality of life of mothers. As a result, it was found that mothers of children with disability had depression and anxiety. In addition, increased depression and anxiety level affected quality of life of mothers negatively.

In a study conducted by Lee, Chen, Shih, Shao, and Lee (2010) children with oppositional defiant symptoms and the quality of life of their mothers were analyzed. Randomly selected 387 mothers of children in an elementary school completed the questionnaire. The children's oppositional defiant symptoms (ODS) status was determined by the maternal rating of the Chinese Swanson, Nolan, and Pelham rating scale, version 4. The mothers` quality of life was determined by maternal reports from the World Health Organization Quality of Life-BREF (WHOQOL-BREF) instrument. As a result, sixty three children met the screening criteria for ODS. The children's ODS status was a significant predictor of the maternal physical capacity, psychological well-being and environment domains of quality of life. The study showed that increase in oppositional defiant symptoms of children in the elementary school positively correlated with poor maternal quality of life.

Lawoko and Soares (2003) compared the quality of life among parents of children with congenital heart disease (n= 1092), parents of children with other diseases (n= 112) and parents of healthy children (n= 293). All parents completed The Goteborg Quality of Life Scale, The Schedule for Social Interaction and The

Hopelessness Scale. As a result, the analysis showed that parents of children with congenital heart disease tended to report lowered quality of life than parents of healthy children. In addition, mothers reported lower quality of life than fathers and variables such as distress, hopelessness and financial situation were more important in explaining the lower quality of life than the gender of the parent and the severity of the children's heart disease.

Yilmaz, Yildirim, Oksuz, Atay and Turan (2010) aimed at evaluating the relations between maternal depression and perceived quality of life and functional limitations of the children with neuromuscular diseases (NMD). Forty children with a diagnosis of NMD and their mothers participated in the study. The quality of life of mothers was assessed by the Turkish version of the Nottingham Health Profile. As a result, it was found that the functional level of children with NMD was one of the factors that affected the quality of life.

Mothers of children with LD also experience the stress of the difficulty which the child experiences. While the child experiences difficulties in learning situations and other social environment such as in the family and school, mothers also feel different responsibilities towards their children (Ellis & Hirsch, 2000) and these responsibilities might sometimes cause feelings of guilt, depression and undermine their social relationships. Mothers of children with LD generally show a variety of problems in cognitive, linguistic and social functioning when compared to mothers of children with NLD (Glidden & Schoolcraft, 2003). Mothers of children with LD, while experience these problems, and also are affected in terms of their quality of life. Negatively affected quality of life of

mothers results in a decreased sense of well-being with a relation to their health perceptions and ability to function (Bumin, Gunal & Tukel, 2008).

Variables in Perceived Quality of Life

While the concept of quality of life has not been researched extensively (Karande & Kulkarni, 2009; Reiter & Bendov, 1996) the number of studies has been increasing. Most research for individuals with LD has focused on individual perceptions of quality of life and variables and domains associated with it. In a review of literature related with individuals with disabilities, Helpern (1993) identified three domains consistently found in quality of life studies, including physical and maternal well-being, performance of various roles and personal fulfillment. Within each domain, there are specific content areas, including physical and mental health, safety from harm, access to community, leisure and recreational activities, personal relationships and social networks, and educational attainment (Helpern, 1993). Giangreco, Cloninger, Mueller, Yuan and Ashworth (1991) identified areas related to the quality of life which are specifically relevant to school age children with disabilities, including having a safe and stable home, engaging in valued activities and varied experiences, having a social network of personally meaningful relationships, and being comfortable and healthy.

As for the variables of individuals with LD that have been researched, Spekman et al., (1992) found that individuals with learning disabilities are less active in social groups, recreational activities and community clubs. In addition, they found that individuals with LD did not perform as well as individuals with NLD regarding rates of graduation and attainment of post-secondary education (Helpern, 1993). In addition, problems with motivation, lowered self-esteem, and

emotional difficulties may continue long years after primary school (Spekman et al., 1992). Another important result was that individuals with LD have been found to have higher rates of dissatisfaction with their lives. Spekman et al. (1992) conducted an investigation of adolescents with LD in order to understand current and past factors related with quality of life. Research findings revealed that participants were described as unsuccessful and rated by their parents as significantly lower across a number of domains: ability to get along with others, satisfaction with educational status, adjustment to life, level of happiness, degree achieving to potential, and ability to handle financial affairs (Spekman, et al., 1992). In addition, these individuals were characterized by lowered adaptation to life events, lower level of self-awareness, lower level of engagement in the world and lower level of perseverance.

In the literature, there have been studies that investigated social emotional variables in children with LD. These studies suggest significant differences between children with LD and children with NLD.

Students with LD have usually been rated by their teachers as displaying a number of maladaptive social skills as well as fewer adaptive social behaviors compared to their peers with NLD (Pearl & Bay, 1999). Children with LD have also been found to show less interpersonal understanding compared to their peers with NLD (Kuhne & Wiener, 2000). In addition, research suggested that children with LD are less accepted, less liked and more neglected by their peers with NLD (Power, 2000). Although it is unclear as to why these differences between groups exist, studies have shown that children with LD show various social cognitive deficits such as role taking skills, social perception skills, social expectations and

social knowledge.

In areas of motivation, locus of control and attribution, additional differences in children with LD have been found through research. Individuals with LD have been found to demonstrate lower motivational orientation compared to individuals with NLD (Principino, 1997). It was found by Huntington and Bender (1993) that adolescents with LD referred both success and failure to internal effects. In a review of literature, Pearl and Bay (1999) found researchers to report the following findings when they compared students with LD with NLD peers: (1) students with LD feel as if they have less control over their performance in school, (2) they are more likely to attribute their failure to a lack of ability (3), they take less personal credit for their success, (4) they report less intrinsic motivation, (5) they show lower levels of self-regulated school-related behavior, and (7) their expectations regarding future performance are lower.

Differences also exist among studies analyzing self-esteem among children with LD. Studies of global self-esteem detected differences between students with LD and students with NLD (Pearl & Bay, 1999). For example, Valas (1999) found adolescents with LD to have lower self-esteem than they peers with NLD. It can be concluded that students with LD who have negative perceptions of their academic competence, nonacademic competence and disability consistently report lower global self-esteem (Pearl & Bay, 1999).

Research also shows that children and adolescents with LD are different from their peers with NLD in levels of depression, anxiety and loneliness. For example, Power (2000) found children (grades 4 to 8) with LD to be at greater risk for loneliness and depression than children with NLD. Huntington and

Bender (1993) reported that students with LD experience higher levels of anxiety as well as depressive symptoms. Huntington and Bender (1993) stated that anxiety may involve fear about appearing incompetent in public, making mistakes, being teased and being criticized.

To conclude, considerable evidence shows that children and adolescents with LD differ from their peers with NLD with respect to behavioral, social emotional and personality variables. The differences in the functioning of children with LD reported in the literature supports the idea that quality of life of children with LD may differ from children with NLD.

As far as the domains of perceived quality of life in the current study are concerned, several different dimensions define perceived quality of life. Sieberer and Bullinger (2000) defined these dimensions as emotional well-being, self-esteem, physical well-being, family, friends, and school.

Emotional Well Being

Emotional or psychological well-being is a general term and it is usually defined with respect to how someone feels about herself. Emotional health has various aspects. As well as feeling about the self, behavior that is appropriate and healthy are important criteria for the measurement of emotional or psychological well-being (Mendlowicz & Stein, 2000). Someone who is emotionally healthy generally indicates some symptoms with respect to understanding and adapting to change, coping with stress, having a positive self-concept, having the ability to love and care for others and acting independently to meet his or her own needs (Mendlowicz & Stein, 2000).

Self-Esteem

Self-esteem is a widely used construct which is close to self-concept in meaning (Wunderlich & Lorr, 1986). Self-esteem is a combination of perceived judgments of significant others and the individual's feelings of efficacy and competence. Perceived judgments of others represent social approval while feelings of efficacy and competence represent a feedback from the individual's own actions. According to Burns (1979) self-esteem might have some dimensions. One dimension is called the basic which reflects the individual's perception of his abilities, status and role in the society. The second which is called the social self is related with how the individual believes others evaluate her. The third is the ideal self or the kind of person the individual would like to be. A general self-esteem construct is the function of the three types of selves described above (Davis et al., 2008).

Physical Well Being

Physical well-being is characterized with the non-existence of a clinically diagnosed illness as well as the feelings of comfort, relaxation, strength and energy. Someone who is physically healthy is not ill, does not feel an ache, is not tired or worn out and feels strong and full of energy (Sieberer & Bullinger, 2000).

Family

Quality of life includes the family dimension because family constitutes the environment which surrounds the person very closely. For many, it is the place where most of the time is spent. In addition, the very close relations of an individual are usually the family bonds. Therefore, the quality in the family is usually a reflection of the quality of life of a child. Sieberer and Bullinger (2000)

states that a child whose quality of life is high gets on well with his parents, feels fine at home and communicates ideas and feelings within the family.

Friends

The existence of friends in the life of a child is usually a reflection of the healthy social development of the child. However, the quality of the relations with friends is equally important. Therefore, it is important for a child to have a healthy social life which includes healthy relations with friends. Sieberer and Bullinger (2000) describes a child who has healthy relations as the one who shares time with friends, thinks that he/she is liked by others, gets along well with friends and also feels different from other people.

School

School is one of the closest systems which surround the school children. Sieberer and Bullinger (2000) states that a child whose quality of school life is healthy is the one who enjoys lessons, looks forward to the weeks ahead, is afraid of bad marks or grades, thinks it is not very difficult to do schoolwork, and finds school interesting.

CHAPTER 3

METHOD

Design

The current study is an example of descriptive research. Information about perceived quality of life of students with LD and their peers who did not have any kind of disability was gathered in the study. No manipulation of the variables was done. The study also includes correlational design because the existing relationship among variables; perceptions of parents, teachers and children about perceived quality of life of the child was examined.

Participants

Participants of this study were selected from students from two regions of İstanbul. Students were selected from 22 schools in Bakırköy and Esenyurt. In Esenyurt there are about 25.800 (İstanbul İl Milli Eğitim Müdürlüğü, 2009) registered primary school students whereas this number is about 15.200 in Bakırköy. The socioeconomic status of people in Bakırköy is expected to be relatively higher than the socioeconomic status of people in Esenyurt. The selection process of the sample was conducted purposefully in terms of age, class and whether the child has a medically reported learning disability or not. In addition, all the students were registered to a primary school in their location because the compulsory education necessitates the maintenance of education until high school, which is for the first eight years. Since the primary school system included the first 8 grades, students were at one of these grades. Children who were qualified for these purposes of the research were selected.

In the study there are two groups: The study group which included the children with LD and the comparison group, in which children with NLD participated. Children in the study group were diagnosed with a learning disability both by a medical health report and by the guidance and research center report. The diagnoses of the hospital and the guidance and research center were pure learning disabilities and any kind of co morbidity with another disability did not exist in the report. However, children in the comparison group did not have any kind of disability. Children in the comparison group matched those in the study group in chronological age, GPA, grade, gender, handedness and income level. Socio-demographic characteristics matched as similar as possible so that the effect of unexpected variables is minimized. Analysis showed that there was not a significant difference between the LD and NLD groups on age, grade, GPA, gender and income level.

In the study group, there are 120 students with LD and 120 students with NLD constitute the comparison group. In total, there are 240 students who participated in the study from Esenyurt and Bakırköy. In both districts there are both study and comparison group students. In Esenyurt, there are 75 students with LD in the study group and 75 students without LD or any form of disability in the comparison group. The number is 45 for the study group and 45 for the comparison group in Bakırköy. In total, 150 students from Esenyurt and 45 students from Bakırköy participated in the study. The study included male and females, males slightly outnumbering girls in the LD and NLD groups. It is stated in the literature that learning disabilities are observed in males more than females (Korkmazlar, 1999; Badian, 1999; DeFries, 1989; Kavala & Reese, 1992; Batum,

2007). In the current study, 53.3 % of the sample was made up of females where as 46.7 % of the population was females.

Participants in this study were primary school students between the ages eight to sixteen. 138 students were between 8-11 ages whereas 102 students were between 12-16 ages. All the students were primary school students registered to a grade between first to eighth grades which include the compulsory educational period in Turkey. Table 1 presents detailed information about the demographic characteristics of the sample. In addition, demographic characteristics with respect to districts (Table 1) and group (Table 2) are also presented. The data were collected the month of April, 2011.

In this study, students were selected from two districts. Number of females and males were similar to each other although males outnumbered females in both comparison and study groups. Children in the comparison group matched the study group very closely in terms of age group, gender, GPA, grade, handedness and family income level and there was no significant difference between LD and NLD groups on these variables (Table 2).

Table 1. Demographic characteristics of the sample

	Districts				Total	
	Esenyurt		Bakırköy			
Characteristics	*n*	*%*	*n*	*%*	*n*	*%*
WITH / WITHOUT LEARNING DISABILITIES (LD)						
LD	75	50	45	50	120	50
NLD	75	50	45	50	120	50
GENDER						
Female	72	48	40	44.4	112	46.7
Male	78	52	50	55.6	128	53.3
AGE						
8-11	82	54.7	56	62.2	138	57.5
12-16	68	45.3	34	37.8	102	42.5
GPA						
1.00-2.00	7	4.7	18	20	25	10.4
2.01-3.00	81	54	54	60	135	56.2
3.01-4.00	62	41.3	18	20	80	33.3
4.01-5.00	-	-	-	-	-	-
HANDEDNESS						
Right	112	74.7	80	88.9	192	80
Left	38	25.3	10	11.1	48	20
GRADE						
1	14	9.3	4	4.4	18	7.5
2	18	12	18	20	36	15
3	24	16	19	21.1	43	17.9
4	30	20	15	16.7	45	18.8
5	8	5.3	13	14.4	21	8.8
6	12	8	12	13.3	24	10
7	18	12	6	6.7	24	10
8	26	17.3	3	3.3	29	12.1
FAMILY INCOME						
0-750 TL	15	10	-	-	15	6.2
751-1250 TL	85	56.7	-	-	85	35.4
1251-2000 TL	45	30	58	64.4	103	42.9
2001-4000 TL	5	3.3	32	35.6	37	15.4
MATERNAL EDUCATION						
No schooling	7	4.7	-	-	7	2.9
Literate	21	14	1	1.1	22	9.2
Primary school	85	56.7	15	16.7	100	41.7
Primary school dropout	12	8	8	8.9	20	8.3
Middle school	11	7.3	17	18.9	28	11.7
High school	14	9.3	43	47.8	57	23.8
Pre-license	-	-	1	1.1	1	.4
Four-year faculty	-	-	5	5.6	5	2.1
Master's	-	-	-	-	-	-

LD (Learning disability) TL (Turkish Liras)

Table 2. Demographic characteristics of the sample for children with without LD

	Group			
	Study (LD)		Comparison (NLD)	
Characteristics	*n*	%	*n*	%
GENDER				
Female	56	46.7	56	46.7
Male	64	53.3	64	53.3
AGE				
8-11	69	57.5	69	57.5
12-16	51	42.5	51	42.5
GPA				
1.00-2.00	15	12.5	10	8.3
2.01-3.00	74	61.7	61	50.8
3.01-4.00	31	25.8	49	40.8
4.01-5.00	-	-	-	-
HANDEDNESS				
Right	96	80	102	85
Left	24	20	18	15
GRADE				
1	14	9.3	4	4.4
2	18	12	18	20
3	24	16	19	21.1
4	30	20	15	16.7
5	8	5.3	13	14.4
6	12	8	12	13.3
7	18	12	6	6.7
8	26	17.3	3	3.3
FAMILY INCOME				
0-750 TL	5	4.2	-	-
751-1250 TL	49	40.8	36	30
1251-2000 TL	44	36.7	59	49.2
2001-4000 TL	22	18.3	15	12.5
MATERNAL EDUCATION				
No schooling	6	5	1	.8
Literate	9	7.5	13	10.8
Primary school	51	42.5	49	40.8
Primary school dropout	7	5.8	13	10.8
Middle school	15	12.5	13	10.8
High school	26	21.7	35	21.8
Pre-license	1	.8	-	-
Four-year faculty	5	4.2	-	-
Master's	-	-	-	-

LD (Learning disability) TL (Turkish Liras)

Instruments

Socio-Demographic Characteristics Form

Socio-demographic characteristics included information about children such as name, gender, district, number of siblings, GPA (General Point Average at school), handedness, working status, medical diagnosis or other psychological difficulties, information about the educational level and income of parents.

Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Revised Version (KINDL-R)

The KINDL-R questionnaire was first created as a German- language measure by Bullinger and then translated into 14 other languages (Bullinger, 1994; cited in Ravens-Sieberer & Bullinger, 2000). This instrument measures the quality of life of children and adolescents. The questionnaire has so far been used and tested in a number of studies involving over 3000 healthy and children with disabilities as well as their parents (Ravens-Sieberer & Bullinger, 2000). The questionnaire has the potential to differentiate between children with different disorders and under different life conditions. In sum, The KINDL-R has been accepted as a modular, psychometrically acceptable and flexible means of measuring quality of life in children through a central module covering generic dimensions in children's quality of life as well as measuring the specific influence of a disorder on the child (Ravens-Sieberer & Bullinger, 2000).

Age specific versions of the scale take into account the changes in the quality of life dimensions in the course of child development. The KINDL-R questionnaire fulfills the need for taking into account progress during child

development and the principle of patient-generated data collection by providing different versions of the questionnaire for different age groups and both a self-report version and a proxy version (Ravens-Sieberer & Bullinger, 2000). The versions of the questionnaire are available in three age groups: ages 4-7, ages 8-12 and ages 13-16. The KINDL-R consists of 24 categorical Likert-scaled items associated with six dimensions: The six dimensions assess the physical well-being, emotional well-being, self-esteem, family, friends and everyday functioning (school or nursery school/kindergarten). Subscale scores are calculated independently and then a total quality of life score is obtained by adding the 6 subscale scores. A high score is an indication of good quality of life (Ravens-Sieberer & Bullinger, 2000). Each dimension consists of four items. In the Kid-KINDL-R (8 to 12 years version), Kiddo-KINDL-R (13 to 16 years version) and KINDL-R (8 to 16 years parents' version) there are five levels in each item (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always). However, Kiddy-KINDL-R (4 to 7-year-old children) scale covers three levels (1 = never, 2 = sometimes, 3 = very often). Due to the difficulty of gathering data from very young children, organization of the subscale questions in Kiddy-KINDL-R (4 to 7-year-old children) differ from other versions (Ravens-Sieberer & Bullinger, 2000). In the self-report version there are twelve questions two for each dimension. The parents' version of the Kiddy-KINDL-R with six dimensions and 24 items is similar with the parents' version of the KINDL-R for 8 to 16-year-old children and teenagers.

In every version of KINDL-R there is an additional sub-scale named disease which includes items that can be filled in case of a hospitalization. This

sub-scale includes six items which measure the child's quality of life in terms of his or her illness (Ravens-Sieberer & Bullinger, 2000). However, in this study, no student was at hospital. As a result, this sub-scale was not filled by the participants.

The psychometric results proved a high degree of reliability (Cronbach's $\alpha \geq .70$ for most of the subscales and samples) and a satisfactory convergent validity of the procedure (Ravens-Sieberer & Bullinger, 2000). In the current study, the Cronbach alpha coefficient was .72. The reliability analysis of KINDL-R was carried out through Multitrait Analysis Program of the New England Medical Center at Tuffts University in Boston (MAP) (Hays, Hayashi, Carson & Ware, 1998; cited in Sieberer & Bullinger, 2000). The reliability was analyzed by confirmatory testing, Cronbach's alpha as a measure of internal consistency revealed values around $\alpha=.70$ in most sub-scales, while at the overall level of consistency coefficient showed over $\alpha=.80$. With respect to convergent validity, KINDL-R sub-scales were correlated with Child Health Questionnaire (Landgraf, Abetz & Ware, 1999) and Life Satisfaction Questionnaire (Herschbach & Henrich, 1998; cited in Sieberer & Bullinger, 2000). Results gave satisfactory correlation ($r>.60$) between the two scales for the convergent validity.

Turkish Form of KINDL-R

The adaptation of the questionnaire was done by a committee led by Erhan Eser in 2007 (Eser, Yüksel, Baydur, Erhart, Saatlı, Özyurt, Özcan & Sieberer, 2008). Firstly, the translation procedure into Turkish and cognitive focus group interviews were carried out. Then, in total, 1918 children between the ages eight

to twelve in Manisa district filled out the questionnaire. In addition, the Turkish form of the instrument was applied to 84 students.

A confirmatory approach was used for reliability and validity analysis. As a result of the confirmatory test, internal consistency emerged as $\alpha > .75$ for the whole instrument. There was a fair development of alpha for the subscales ($\alpha > .50$) specifically for the friend dimension. With respect to the overlap of the total quality of life with each dimension, the corrected coefficient value changed between .33 and .51 (Eser et al., 2008).

One big (BG) and one small group (SG) participated in the research. Item-discriminant validity results of the larger group (BG, n = 1918) and smaller second group (SG, n = 84) for all the dimensions reflected very good discriminant validity (. 95) (Eser et al., 2008). In order to check the validity of the study, confirmatory factor analysis instrument was applied to the data gathered from the BG and the SG and the results indicated congruency (Eser et al., 2008). For BG, the quality of life value was less than .08 for the entire instrument and in all the dimensions, except the family dimension.

The Turkish version of Kid-KINDL-R is valid and reliable (Eser et al., 2008). This version is an appropriate measure for assessing quality of life of school children. Moreover, it can also be used in clinical studies together with specific measures for the particular illness (Eser et al., 2008).

In addition to the child and parents forms of the KINDL-R questionnaire, another form of the questionnaire was prepared by the researcher and given to the classroom teacher of the child in Turkish. Perceptions of the teacher about the child were analyzed. The teacher evaluated the child in terms of his or her

emotional well-being, self-esteem, friends and everyday functioning. The items related with the physical and family domains were not included into the teacher form because the information needed to answer these items might have not been available to the teachers. When it comes to the reliability of the measure, the Cronbach alpha coefficient was .68.

World Health Organization Quality of Life Assessment (WHOQOL-BREF)

World Health Organization Quality of Life Group has two main quality of life scales: The WHOQOL and The WHOQOL-BREF which are highly correlated with each other (Fidaner, Elbi, Eser & Göker, 1999). The WHOQOL-BREF is the shortened 26-item version of the WHOQOL-100 containing items which were taken from the WHOQOL-100 field trial data. The WHOQOL-BREF contains one item from each of the 24 facets of QOL existing in the WHOQOL-100, with two additional items from the general facet on overall QOL and general health which is not included in the scoring (Skevington, Lotfy & O'Connell, 2004).

WHOQOL-BREF is scored in four domains: Domain 1: Physical health, Domain 2: Psychological, Domain 3: Social relations and Domain 4: Environment, with all items scored as part of their specific domain. No scoring of the domain is done if twenty per cent of items or more are missing, and are unacceptable where two or more items are missed (Skevington et al., 2004). The scores are transformed on a scale from 0 to 100 to make it possible for comparisons to be made between domains.

The WHOQOL-BREF is administered by respondents themselves. Standard instructions, socio-demographic information are generally completed before answering the 26 items of the WHOQOL-BREF (Skevington et al., 2004).

During development of the WHOQOL-100, four types of 5-point Likert interval scales were designed and tested to indicate intensity, capacity, frequency and evaluation (Skevington et al., 2004). The response scales are also used in the WHOQOL-BREF. Items ask 'how much', 'how completely', how often', 'how good' or 'how satisfied' the respondent felt in the last 2 weeks; different response scales are dispersed across the domains (Skevington et al., 2004).

Psychometric properties of the WHOQOL-BREF are satisfactory (Skevington et al., 2004). For the internal consistency reliability, as a measure of the scale's internal consistency for the total sample, values for Cronbach's a were acceptable ($\alpha > .70$) for physical health= .82, psychological= .81, and environment= .80, respectively. The internal consistency result was smaller for social relationships= .68 (Karabilgin, 2001).

For discriminant validity, a comparison of domain scores from unhealthy and healthy respondents showed that for the majority of countries, discriminant validity was significant for each domain in the total population. All domains showed consistency with the overall quality of life and health. Discriminant validity was best observable in the physical domain, followed by the psychological, social and environment domains (Karabilgin, 2001). Hierarchical regression was used to assess the impact of gender and age on domain scores. Data collected from unhealthy and healthy people showed that gender and age together, only explained 2.7% of the overall variance although this effect was significant (Skevington et al., 2004).

Turkish Form of WHOQOL-BREF (WHOQOL-BREF –TR)

WHOQOL-100 was adapted to the Turkish Culture by the WHOQOL Turkish Group according to the instructions of WHO (Fidaner, Elbi, Eser & Göker, 1999) and WHOQOL-BREF was standardized to Turkish with the usage of the data of the pilot study of WHOQOL-100 adaptation (Karabilgin, 2001).

In the Turkish version of the WHOQOL-BREF, a similar factorial analysis to the global form was conducted. In the WHOQOL-BREF report which was published by the Hong-Kong center, this analysis was found to be similar to the global model. The factorial structure included four factors (Fidaner, Elbi, Eser, & Göker, 1999). In the Turkish form, the psychological and environmental domains were divided into three factors whereas the social domain was divided into two factors. The physical domain was not divided (Fidaner, Elbi, Eser & Göker, 1999; Karabilgin, 2001).

In the WHOQOL-BREF (TR), the domain and general quality of life score averages were compared with the scores of people who evaluated their subjective health status. The subjective evaluation scores and the WHOQOL-BREF (TR) were correlated in Pearson Correlation. The correlation results were .62 for physical domain,.40 for psychological domain,.30 for social domain and .25 for environmental domain. General health and quality of life scores correlated with the related items of WHOQOL-BREF (TR) scores were correlated .34 and.64, respectively (Fidaner, Elbi, Eser & Göker, 1999; Karabilgin, 2001).

In the current study the results were .57 for physical domain, .43 for psychological domain, .34 for social domain and.31 for environmental domain.

As for the reliability of WHOQOL-BREF (TR), there was found high internal consistency (Karabilgin, 2001). The highest consistency was found in the physical domain for both unhealthy and healthy people (.83 and .79). The lowest internal consistency was found in the social domain (.58 for both unhealthy and healthy people).

It can be maintained that the test-retest reliability of the WHOQOL-BREF (TR) is relatively high compared with global data (Fidaner, Elbi, Eser & Göker, 1999). The results of WHOQOL-BREF (TR) which was given to 45 university students after 3 weeks showed correlations between .57 and .81 (Fidaner, Elbi, Eser & Göker, 1999).

Learning Disabilities Screening Measure

This screening test which is administered for school children was originally developed by Korkmazlar (1992) as a 36 item scale and developed by Erman (1997) by modifying several items and adding 52 more items. The screening scale has 88 items which aims at giving descriptive information about the child. In addition, the scale is made up of 17 different domains with items in different numbers: Academic Success Domain, Reading Domain, Visual Perception Domain, Auditory Perception Domain, Writing Domain, Arithmetic Domain, Study Skills Domain, Organization Skills Domain, Directions Domain, Tactile Domain, Sequencing Skills Domain, Verbal Skills Domain, Motor Skills Domain, Social-Emotional Domain, Action Domain, Attention Domain and Motivation Domain. The test is intensively used in Turkish schools and guidance and research centers (Erman, 1997). This test can be used with other forms of measures but cannot be used as the sole means of diagnosis (Erman, 1997).

The screening test can be administered to all primary and high school students by their classroom teachers with the collaboration of the school counselor (Erman, 1997). There are four scales in the test (never, sometimes, often, and always). The 88 items in the test define the problems that the students may experience. The scales define the frequency of the occurrence of the problem behavior.

In the proposed study, the scale was used to double check the reliability and validity of the diagnosis done by the institutions because children in the study group had already been diagnosed as having a learning disability.

Table 3. Administration of measures

	Learning Disability (LD) group				No Learning Disability (NLD) group			
Measure	Child	Mother	Teacher	Parent	Child	Mother	Teacher	Parent
SDQ	-	-	-	Given	-	-	-	Given
KINDL-R Child	Given	-	-	-	Given	-	-	-
KINDL-R Parent	-	-	-	Given	-	-	-	Given
KINDL-R Teacher	-	-	Given	-	-	-	Given	-
WHOQOL-BREF-TR	-	Given	-	-	-	Not Given	-	-
LDSM	-	-	Given	-	-	-	Not Given	-

SDQ (Socio-demographic questionnaire), KINDL-R Child (Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Revised Version Child form), KINDL-R Parent (Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Revised Version Parent form), KINDL-R Teacher (Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Revised Version Teacher form), WHOQOL-BREF-TR (World Health Organization Quality of Life Assessment-Turkish Form), LDSM(Learning Disabilities Screening Measure)

Procedure

This study was conducted in a period of 5 months. The procedure for receiving permission from institutions started in February, 2011 after the research was permitted to be conducted. Active cooperation with parents, classroom teachers and the staff in the GRC was ensured.

Firstly, an official permission from Province of İstanbul Governor's Office of the Director of National Education (Appendix A) and an official consent from the Ethical Committee of Social Sciences of Boğaziçi University (Appendix B) were taken to conduct the current study. With the collaboration of Bakırköy Guidance and Counseling Center and Esenyurt Guidance and Counseling Center, children with LD were identified and contact with their families established. Information about the students who did not have any kind of disability in the comparison group was taken from the reports of their schools. In March, parents were informed and a demographic information questionnaire was filled by them. Next, the child form of Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents (KINDL-R) was administered to their children and the parent form of the same instrument was given to the parent. In addition, mothers of children with LD were given another measure, World Health Organization Quality of Life Assessment (WHOQOL-BREF). After the data were gathered from children and parents, active collaboration took place with classroom teachers of both students with LD and students without disabilities. During April and May, 2011 classroom teachers of students with LD filled out two instruments; The KINDL-R Teacher Form and Learning Disabilities Screening Measure-LDSM (Öğrenme Bozukluğu Belirti

Tarama Testi). Classroom teachers of comparison group only filled the KINDL-R teacher questionnaire.

Data Analyses

After the data were collected and coded, related data were sent to the KINDL-R Turkish Standardization Group and WHOQOL Turkish Standardization Group to be analyzed.

All the statistical analyses were done by using the Statistical Package for Social Sciences 16 (SPSS 16). The significance level was set $p<.05$ unless otherwise indicated. Frequencies and percentages of the demographic variables of the sample were displayed.

The first question was analyzed through usage of independent samples t-test and ANOVA to observe the differences between the study and comparison group as well as understand the characteristics of children. T test was used to analyze the difference of groups in terms of demographic variables. For the first question, Pearson product-moment correlation was also used to analyze the relationship between domains of Learning Disability Screening Measure. The second and third questions were analyzed through Pearson product-moment correlation to see the relationship between variables.

CHAPTER 4

RESULTS

Overview: Organization of Results

Results of the study are presented in four sections: (1) descriptive analyses of associated measures (2) characteristics of children with and without learning disabilities in terms of their perceived quality of life (3) the relationship among the perceptions of children and the perceptions of their teachers with respect to children's perceived quality of life (4) the relationship between perceived quality of life of children with LD and the perceived quality of life of their mothers

Presentation of Results

Descriptive Analyses of Associated Measures

In this study, Table 4 presents means and standard deviations of every measure and subscales of these measures together with minimum and maximum scores. Differences between means and scores are observable.

Table 4. Means, standard deviations and minimum/maximum scores for the quality of life measures

		Study group (LD)				Comparison group (NLD)		
Measure	Min	Max	Mean	(SD)	Min	Max	Mean	(SD)
KINDL-R-Kid								
Total	37.50	75.00	52.4	07.03	20.83	82.29	65.03	13.17
Physical	25.00	100.0	55.97	13.54	18.75	100.0	67.97	15.79
Emotional	25.00	93.75	53.02	13.29	18.75	93.75	65.16	18.57
Self-esteem	25.00	87.50	49.84	13.93	12.50	93.75	70.52	16.29
Family	6.25	100.0	56.30	16.80	25.00	93.75	64.11	18.18
Friends	18.75	87.50	54.64	12.95	6.25	87.50	68.02	14.83
School	18.75	68.75	44.84	12.65	18.75	87.50	54.43	15.30
KINDL-R-Parent								
Total	39.58	80.21	56.12	08.22	28.1	79.17	65.20	09.03
Physical	25.00	100.0	55.83	12.23	18.75	93.75	67.81	12.62
Emotional	25.00	100.0	54.79	13.21	18.75	87.50	62.97	13.46
Self-esteem	12.50	87.50	53.23	14.52	31.25	93.75	65.94	12.04
Family	31.25	100.0	63.13	17.42	12.50	87.50	66.77	14.01
Friends	37.50	100.0	61.30	13.39	6.25	93.75	68.54	14.06
School	50.00	18.75	48.39	15.08	6.25	87.50	59.17	15.18
KINDL-R-Teacher								
Total	34.38	62.50	45.13	05.55	35.94	73.44	57.55	07.47
Emotional	25.00	68.75	47.34	09.68	12.50	81.25	59.27	11.40
Self-esteem	18.75	56.25	41.88	08.25	31.25	81.25	58.33	11.92
Friends	25.00	75.00	46.98	11.74	25.00	81.25	61.20	11.34
School	25.00	75.00	44.32	09.79	25.00	75.00	51.41	9.15
WHOQOL-BREF-TR (100)								
Physical	28.57	96.43	57.55	13.50	NG	NG	NG	NG
Psychological	16.67	95.83	54.62	13.89	NG	NG	NG	NG
Social	8.33	100.0	50.94	18.96	NG	NG	NG	NG
Environmental	18.75	84.38	44.78	11.76	NG	NG	NG	NG
Add-Social Pressure	25.00	86.11	45.99	10.49	NG	NG	NG	NG

KINDL-R Child (Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Revised Version Cild form), KINDL-R Parent (Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Revised Version Parent form), KINDL-R Teacher (Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Revised Version Teacher form), WHOQOL-BREF-TR (World Health Organization Quality of Life Assessment-Turkish Form., NG (Not given)

Characteristics of Children in Terms of Their Perceived Quality of Life

Differences between quality of life scores in terms of gender

An independent-samples t-test was conducted to compare the quality of life scores for males and females. According to the results, in the total sample, there was no significant difference in total self-perceived quality of life scores for males (M=57.59, SD=12.06) and females, M=60.06, SD=12.45; t (238) = 1.55, p>.05. Parent reported quality of life scores of children measured by KINDL-R parent for males (M=60.23, SD=9.56) and females, M=61.15, SD=9.97; t (238) =.73, p>.05 did not differ significantly. Similarly, teacher reported quality of life scores of children, measured by KINDL-R teacher form for males (M=51.56, SD=8.47) and females M=51.09, SD=9.70 *t* (238) =-.078, p>.05 did not differ significantly.

Within the LD (study) group, there was no significant difference in total self-perceived quality of life scores for males (M=52.08, SD=6.88) and females, M=52.87, SD=7.23; t (118) = .61, p>.05 in the total sample. Parent reported quality of life scores of children measured by KINDL-R parent for males (M=55.70, SD=7.5) and females, M=56.60, SD=8.98; t (118) =.60, p>.05 did not differ significantly. However, teacher reported quality of life scores of children, measured by KINDL-R teacher form for males (M=46.41, SD=6.02) and females M=43.67, SD=4.60 *t* (118) =-2.78, p<.05 differed significantly.

Within the NLD (comparison) group, there was no significant difference in total self-perceived quality of life scores for males (M=63.10, SD=13.56) and females, M=67.24, SD=12.47; t (118) = 1.73, p>.05 in the total sample. Parent

reported quality of life scores of children measured by KINDL-R parent for males (M=64.76, SD=9.25) and females, M=65.70, SD=8.82; t (118) =.56, p>.05 did not differ significantly. Similarly, teacher reported quality of life scores of children, measured by KINDL-R teacher form for males (M=56.71, SD=7.39) and females M=58.51, SD=7.52; *t* (118) =1.31, p>.05 did not differ significantly.

Differences between quality of life scores in terms of age group

An independent-samples t-test was conducted to compare the quality of life scores for children aging between 8 to 11 and 12 to 16. For the children in total sample, children between ages 8 to 11 (M=51.30, SD=8.26) did not have significantly different self-perceived quality of life scores than children between ages 12 to 16 M=51.39, SD=10.06; t (238) =-.78, p>.05. When it comes to parent-perceived quality of life of children, children between ages 8 to 11 (M=60.87, SD=10.20) did not have significantly different parent-perceived quality of life scores than children between ages 12 to 16, M=60.37, SD=9.13; t (238) =.39, p>.05. Similarly, teacher-perceived quality of life of children did not differ significantly for children between ages 8 to 11 (M=58.73, SD=13.17) and children between ages 12 to 16, M=58.75, SD=11.02; t (238) =-.009, p>.05.

Within the LD (study) group, there was no significant difference in total self-perceived quality of life scores for children between ages 8 to 16 (M=52.99, SD=7.35) and children between ages 12 to 16, M=51.71, SD=6.56; t (118) = .98, p>.05. Parent reported quality of life scores of children measured by KINDL-R parent for 8 to 11 aged children (M=56.55, SD=8.27) and 12 to 16 aged children, M=55.52, SD=8.19; t (118) =.60, p>.05 did not differ significantly. Similarly,

teacher reported quality of life scores of children, measured by KINDL-R teacher form for 8 to 11 aged children (M=45.83, SD=5.65) and 12 to 16 aged children M=44.17, SD=5.31 *t* (118) =1.62, p>.05 did not differ significantly.

Differences between quality of life scores in terms of family income

In the study, family income was divided into four groups. However, the difference between two groups (751-1250 TL and 1251-2000 TL) was analyzed due to the limited number of children in two groups (0-750 TL and 2000-4000 TL). For the total sample, children coming from the income group 751-1250 TL (M=61.22, SD=13.79) did not report significantly different self-reported quality of life scores than the income group 1251-2000 TL, M=58.47, SD= 11.44, t(186)=1.50, p>.50. In addition, parent-perceived quality of life of children in the income group 751-1250 TL (M=61.66, SD=10.41) did not significantly differ from parent reports in income group of 1251-2000 TL, M=60.67, SD=9.30; t (186) =.69, >.50. Similarly, teacher-perceived quality of life was not significantly different for the 751-1250 TL group (M=50.83, SD=10.13) and the 1251-2000 TL group, M=52.24, SD=8.74; t(186) = -1.03, p>.50.

For the LD sample, children coming from the income group 751-1250 TL (M=54.04, SD=7.56) did not report significantly different self-reported quality of life scores than the income group 1251-2000 TL, M=52.81, SD= 6.73, t(91)=.83, p>.50. In addition, parent-perceived quality of life of children in the income group 751-1250 TL (M=58.33, SD=9.30) did not significantly differ from parent reports in income group of 1251-2000 TL, M=55.59, SD=7.54; t (91) =1.54, p>.50. However, teacher-perceived quality of life was significantly different for the 751-

1250 TL group (M=43.30 SD=4.04) and the 1251-2000 TL group, M=46.52, SD=6.31; t (91) = -2.96, p<.50.

As for the NLD sample, children coming from the income group 751-1250 TL (M=71.00, SD=14.40) reported significantly different self-reported quality of life scores than the income group 1251-2000 TL, M=62.69, SD= 12.41, t(93)=2.98, p<.50. In addition, teacher-perceived quality of life of children in the income group 751-1250 TL (M=61.07, SD=6.07) also significantly differed from parent reports in income group of 1251-2000 TL, M=56.51, SD=7.84; t (93) =2.98, p<.50. However, parent-perceived quality of life was not significantly different for the 751-1250 TL group (M=66.20 SD=10.24) and the 1251-2000 TL group, M=64.46, SD=8.71; t (93) = .88, p>.50.

Differences between quality of life scores in terms of GPA

Student success level was analyzed in groups of low and mediocre which include the biggest number of students. For the total sample, quality of life of children as perceived by them was significantly different between the low success group (M=57.44, SD=11.27) and the mediocre success group, M=63.33, SD=13.20; t(213)=-3.48, p<.05. However, perceptions of parents of the quality of life of their children did not differ significantly between the low success group (M=60.47, SD=10.13) and the mediocre success group, M=61.41, SD=9.70; t(213)= -.670, p>.50. Similarly perceptions of teachers of the quality of life of their students did not differ significantly between the low success group (M=50.91, SD=8.52) and the mediocre success group, M=52.67, SD=10.19; t (213) = -1.36, p>.50.

For the LD (study) population, quality of life of children as perceived by them was not significantly different between the low success group (M=52.03, SD=6.20) and the mediocre success group, M=54.13, SD=8.87; t (103) =-1.37, p<.05. In addition, perceptions of parents of the quality of life of their children did not differ significantly between the low success group (M=56.11, SD=8.92) and the mediocre success group, M=56.46, SD=7.65; t (103) = -1.87, p>.50. Similarly perceptions of teachers of the quality of life of their students did not differ significantly between the low success group (M=45.12, SD=5.23) and the mediocre success group, M=43.90, SD=4.67; t (103) = 1.12, p>.50.

For the NLD sample, quality of life of children as perceived by them was significantly different between the low success group (M=63.97, SD=12.55) and the mediocre success group, M=69.15, SD=12.18; t (108) =-2.18, p<.05. However, perceptions of parents of the quality of life of their children did not differ significantly between the low success group (M=65.74, SD=8.96) and the mediocre success group, M=64.54, SD=9.60; t (108) = .67, p>.50. Similarly perceptions of teachers of the quality of life of their students did not differ significantly between the low success group (M=57.94, SD=6.10) and the mediocre success group, M=58.22, SD=8.72; t (108) = -.20, p>.50.

Differences between quality of life scores in terms of maternal education

Maternal education was analyzed in groups of primary school and high school which characterized the majority of the sample. For the total sample, quality of life of children as perceived by them was significantly different between the primary school group (M=60.64, SD=13.04) and the high school group, M=54.60,

SD=10.08; t (155)=3.01, p<.05. However, perceptions of parents of the quality of life of their children did not differ significantly between the primary school group (M=61.06, SD=9.42) and the high school group, M=60.14, SD=10.26; t (155) =.56, p>.50. Similarly perceptions of teachers of the quality of life of their students did not differ significantly between the primary school group (M=52.01, SD=10.12) and the high school group, M=49.40, SD=6.36; t (155) = 1.76, p>.50.

For the LD sample, quality of life of children as perceived by them was not significantly different between the primary school group (M=52.56, SD=7.44) and the high school group, M=52.73, SD=6.87; t (75)=-1.65, p>.05. In addition, perceptions of parents of the quality of life of their children did not differ significantly between the primary school group (M=56.38, SD=8.97) and the high school group, M=55.93, SD=8.01; t (75) =.21, p>.50. Similarly perceptions of teachers of the quality of life of their students did not differ significantly between the primary school group (M=43.84, SD=5.22) and the high school group, M=45.97, SD=5.55; t (75) = -1.66, p>.50.

For the NLD sample, quality of life of children as perceived by them was significantly different between the primary school group (M=69.04, SD=12.30) and the high school group, M=56.18, SD=12.02; t (78)=4.60, p<.05. Similarly, perceptions of teachers of the quality of life of their students differed significantly between the primary school group (M=60.52, SD=6.16) and the high school group, M=52.27, SD=5.58; t (78) =6.05, p<.50. On the contrary, perceptions of parents of the quality of life of their students did not differ significantly between the primary school group (M=65.92, SD=7.21) and the high school group, M=63.68, SD=10.71; t (78) = 1.12, p>.50.

Differences between children with and without learning disabilities in terms of their quality of life scores

In this section, analyses of the differences of quality of life scores are analyzed. The differences were analyzed both in terms of group (LD and NLD), district and the interaction of the two variables.

Table 5. KINDL-R-Kid scores according to groups, districts and their interaction

Measure					
KINDL-R-Kid		SS	df	MS	F
Total	District	5525.03	1	5525.03	74.48*
	Group	6339.39	1	6339.39	85.45*
	District*Group	3497.74	1	3497.74	47.15*
	Within	17507.43	236	74.18	
	Total	36036.79	239		
Physical	District	9404.96	1	9404.96	56.16*
	Group	5990.12	1	5990.12	35.77*
	District*Group	2531.35	1	2531.25	15.12*
	Within	39521.99	236	167.47	
	Total	60093.30	239		
Emotional	District	14980.75	1	14980.75	82.82*
	Group	5671.97	1	5671.97	31.36*
	District*Group	3945.41	1	3945.41	21.81*
	Within	42686.81	236	180.88	
	Total	70449.06	239		
Self-esteem	District	1321.63	1	1321.63	6.13*
	Group	20335.95	1	20335.95	94.38*
	District*Group	2489.59	1	2489.59	11.56*
	Within	50848.61	236	215.46	
	Total	80312.34	239		
Family	District	11141.98	1	11141.98	48.54*
	Group	1354.65	1	1354.65	5.90*
	District*Group	7595.61	1	7595.61	33.09*
	Within	54169.75	236	229.53	
	Total	76569.44	239		
Friend	District	35.25	1	35.25	.19
	Group	8383.69	1	8383.69	44.10*
	District*Group	1246.97	1	1246.97	6.56*
	Within	44864.58	236	190.10	
	Total	56896.97	239		
School	District	6103.52	1	6103.52	40.15*
	Group	2956.64	1	2956.64	19.45*
	District*Group	4900.00	1	4900.00	32.23*
	Within	35876.04	236	152.02	
	Total	52389.97	239		

*$p < 0.05$ (F scores represent significance)

In table 5, quality of life scores as perceived by children are compared according to group, district and their interaction. A two-way analysis of variance was conducted to explore the impact of group and district on quality of life scores as perceived by the child himself/herself. The interaction effect between district and group was statistically significant for the total, physical, emotional, self-esteem, family, friend and school domains, $F(1, 236) = 47.15, 15.12, 21.81, 11.56, 33.09, 6.56, 32.23$, $p<.05$, respectively. Similarly, there was a statistically significant main effect for group in total, physical, emotional, self-esteem, family, friend and school domains, $F(1, 236) = 85.45, 35.77, 31.36, 94.38, 5.90, 44.10, 19.45$, $p<.05$, respectively. However, district affect was statistically significant in total, physical, emotional, self-esteem, family, and school domains, $F(1, 236) = 74.48, 56.16, 82.82, 6.13, 48.54, 40.15$; $p<.05$, respectively.

Table 6. KINDL-R-Parent scores according to groups, districts and their interaction

Measure					
KINDL-R-Parent		SS	df	MS	F
Total	District	135.74	1	135.74	1.82
	Group	4728.74	1	4728.74	63.40*
	District*Group	6.70	1	6.70	.09
	Within	17603.15	236	74.59	
	Total	22695.10	239		
Physical	District	554.21	1	554.21	3.65
	Group	8985.46	1	8985.46	59.23*
	District*Group	391.71	1	391.71	2.58
	Within	35802.78	236	151.71	
	Total	45358.72	239		
Emotional	District	67.72	1	67.72	.40
	Group	5362.51	1	5362.51	31.64*
	District*Group	2266.16	1	2266.16	13.37*
	Within	40001.74	236	169.50	
	Total	46347.49	239		
Self-esteem	District	434.03	1	434.03	2.47
	Group	10041.71	1	10041.71	57.09*
	District*Group	383.51	1	383.51	2.18
	Within	41513.19	236	175.90	
	Total	52020.83	239		
Family	District	554.21	1	554.21	2.27
	Group	351.56	1	351.56	1.44
	District*Group	1181.64	1	1181.64	4.83*
	Within	57747.2	236	244.69	
	Total	60280.60	239		
Friend	District	2594.63	1	2594.63	14.52*
	Group	3222.93	1	3222.93	18.04*
	District*Group	97.93	1	97.93	.55
	Within	42169.10	236	178.68	
	Total	48006.35	239		
School	District	7421.11	1	7421.11	39.06*
	Group	4769.63	1	4769.63	25.10*
	District*Group	2226.66	1	2226.66	11.72*
	Within	44838.89	236	189.99	
	Total	61460.76	239		

*$p < 0.05$ (F scores represent significance between groups)

In table 6, quality of life scores as perceived by parents are compared according to group, district and their interaction. A two-way analysis of variance was conducted to explore the impact of group and district on quality of life scores as perceived by the parent. The interaction effect between district and group was statistically significant for the emotional, family and school domains, F (1, 236) =

13.37, 4.83, 11.72; p<.05, respectively. Similarly, there was a statistically significant main effect for group in total, physical, emotional, self-esteem, friend and school domains, F (1, 236) = 63.40, 59.23, 31.64, 57.09, 18.04, 25.10; p<.05, respectively. However, district affect was statistically significant only in friend and school domains, F (1, 236) = 14.52, 25.10; p<.05, respectively.

Table 7. KINDL-R-Teacher scores according to groups, districts and their interaction

Measure					
KINDL-R-Teacher		SS	df	MS	F
Total	District	232.88	1	232.88	7.28*
	Group	6491.99	1	6491.99	203.05*
	District*Group	2536.59	1	2536.59	79.34*
	Within	7545.55	236	31.97	
	Total	19573.20	239		
Emotional	District	1710.17	1	1710.17	16.96*
	Group	6584.65	1	6584.65	65.30*
	District*Group	1104.18	1	1104.18	10.95*
	Within	23798.61	236	100.84	
	Total	35148.28	239		
Self-esteem	District	1254.34	1	1254.34	14.96*
	Group	11601.09	1	11601.09	138.40*
	District*Group	3958.51	1	3958.51	47.23*
	Within	19781.94	236	83.82	
	Total	41247.40	239		
Friend	District	549.32	1	549.32	4.80*
	Group	8194.02	1	8194.02	71.63*
	District*Group	4157.56	1	4157.56	36.34*
	Within	27002.43	236	114.42	
	Total	43839.68	239		
School	District	59.42	1	59.42	.71
	Group	1841.84	1	1841.84	22.14*
	District*Group	1667.36*	1	1667.36	20.04*
	Within	19637.15	236	83.21	
	Total	24374.35	239		

*p < 0.05 (F scores represent significance between groups)

In table 7, quality of life scores as perceived by teachers are compared according to group, district and their interaction. A two-way analysis of variance was conducted to explore the impact of group and district on quality of life scores as perceived by the teacher. The interaction effect between district and group was

statistically significant for the total, emotional, self-esteem, friend and school domains, $F(1, 236) = 79.34, 10.95, 47.23, 36.34, 20.04$; $p<.05$, respectively. Similarly, there was a statistically significant main effect for group in total, emotional, self-esteem, friend and school domains, $F(1, 236) = 203.05, 65.30, 138.40, 71.63, 22.14$; $p<.05$, respectively. District affect was statistically significant in total, emotional, self-esteem and friend domains, $F(1, 236) = 7.28, 16.96, 14.96, 4.80$; $p<.05$, respectively.

Table 8. Differences between LD (study) and NLD (comparison) groups in terms of their KINDL-R quality of life total and subscale scores

Measure	Group Mean		t-value
	LD	NLD	
KINDL-R-Kid			
Total	52.4	65.0	-9.2*
Physical	55.9	67.9	-6.3*
Emotional	53.0	65.2	-5.8*
Self-esteem	49.8	70.5	-10.6*
Family	56.3	64.1	-3.4*
Friends	54.6	68.0	-7.4*
School	44.8	54.4	-5.2*
KINDL-R-Parent			
Total	56.1	65.2	-8.1*
Physical	55.8	67.8	-7.4*
Emotional	54.7	62.9	-4.7*
Self-esteem	53.2	65.9	-7.3*
Family	63.1	66.7	-1.7
Friends	61.3	68.5	-4.1*
School	48.3	59.1	-5.5*
KINDL-R-Teacher			
Total	45.1	57.5	-14.6*
Emotional	47.3	59.2	-8.7*
Self-esteem	41.8	58.3	-12.4*
Friends	46.9	61.2	-9.5*
School	44.3	51.4	-5.8*

NOTE: Values are means and t scores representing significance between groups (LD and NLD).

*$p<0.05$

Between the LD and NLD group significant differences were found in terms of the quality of life scores measured by KINDL-R total and subscale scores. There are significant differences between the children with LD and children with NLD in terms of the total quality of life of the child perceived by him/her and measured by KINDL-R Kid [$t(238)=-9.2$, $p<.05$]. Similarly, between

the LD (study) and NLD (comparison) groups, there is a significant difference between the child's total quality of life as perceived by parents, measured by KINDL-R parent [$t(238)=-8.1$, $p<.05$] and child's total quality of life as perceived by teacher, measured by KINDL-R teacher [$t(238)=-14.6$, $p<.05$]. When it comes to the subscales of the forms of KINDL-R, there are significant differences between LD and NLD groups in terms of all subscales, except the family relations of the child perceived by the parent, measured by KINDL-R-parent [$t(238)=-1.7$, $p>.05$] (Table 8).

Table 9. Differences between LD (study) and NLD (comparison) groups in terms of their KINDL-R quality of life total and subscale scores in Esenyurt

Measure	Group Mean		t-value
	LD	NLD	
KINDL-R-Kid			
Total	53.2	71.7	-11.6*
Physical	58.3	75.3	-7.5*
Emotional	56.0	74.4	-7.9*
Self-esteem	49.1	74.8	-10.1*
Family	57.2	73.7	-6.1*
Friends	53.1	70.1	-6.9*
School	45.2	61.8	-8.0*
KINDL-R-Parent	56.8	65.6	-5.7*
Total			
Physical	58.0	68.0	-4.5*
Emotional	57.5	61.0	-1.6
Self-esteem	53.1	63.9	-7.3*
Family	62.5	69.6	-2.6*
Friends	59.2	65.5	-4.1*
School	50.3	65.8	-6.2*
KINDL-R-Teacher			
Total	43.4	60.8	-18.8*
Emotional	47.7	63.0	-8.9*
Self-esteem	40.5	63.2	-16.9*
Friends	42.5	63.2	-13.1*
School	42.6	53.8	-7.9*

NOTE: Values are means and t scores representing significance between groups.

*$p<0.05$

Particularly for Esenyurt, between the LD and NLD group significant differences were found in terms of the quality of life scores measured by KINDL-R total and subscale scores. There are significant differences between the children with LD and children with NLD in terms of child's total quality of life as perceived by him/ her and measured by KINDL-R Kid [$t(148)=-11.6$, $p<.05$].

Similarly, between the LD (study) and NLD (comparison) groups, there is a significant difference between the total quality of the child perceived by parents, measured by KINDL-R parent [t (146) =-5.7, $p<.05$] and child's total quality of life as perceived by teacher, measured by KINDL-R teacher [t (148) =-18.8, $p<.05$]. When it comes to the subscales of the forms of KINDL-R, there are significant differences between LD and NLD groups in terms of all subscales, except the emotional well-being of the child perceived by the parent, measured by KINDL-R-parent [t(148)=-1.76, $p>.05$] (Table 9).

Table 10. Differences between LD (study) and NLD (comparison) groups in terms of their KINDL-R quality of life total and subscale scores in Bakırköy

Measure	Group Mean LD	Group Mean NLD	t-value
KINDL-R-Kid			
Total	51.1	53.9	-2.1*
Physical	52.1	55.7	-1.5
Emotional	53.0	65.2	-0.6
Self-esteem	48.1	49.7	-4.5*
Family	54.7	48.1	2.5*
Friends	57.1	64.6	-3.1*
School	44.1	42.1	-5.2*
KINDL-R-Parent			
Total	54.9	64.4	-6.3*
Physical	52.2	67.5	-7.1*
Emotional	50.1	66.2	-5.9*
Self-esteem	53.3	69.3	-6.5*
Family	64.0	61.9	1.7
Friends	64.7	73.6	-3.1*
School	45.1	48.1	-1.2
KINDL-R-Teacher			
Total	48.1	52.1	-3.4*
Emotional	46.6	53.1	-3.2*
Self-esteem	44.1	50.1	-2.6*
Friends	54.3	57.7	-1.3
School	47.1	47.4	-1.3

NOTE: Values are means and t scores representing significance between groups.

*$p<0.05$

When it comes to Bakırköy district, between the LD and NLD group significant differences were found in terms of the quality of life scores measured by KINDL-R total and subscale scores. There are significant differences between the children with LD and children with NLD in terms of the child's total quality of life as perceived by him/her and measured by KINDL-R Kid [$t(88)=-2.1$,

p<.05]. Similarly, between the LD (study) and NLD (comparison) groups, there is a significant difference between child's total quality of life as perceived by parents, measured by KINDL-R parent [$t(88)=-6.3$, $p<.05$] and child's total quality of life as perceived by teacher and measured by KINDL-R teacher [$t(88)=-3.4$, $p<.05$] (Table 10).

Characteristics of Children with LD According to the Results of the Learning Disability Screening Measure

Table 11 shows the minimum, maximum, mean and standard deviation scores of the Learning Disability Screening Test -which was administered to the LD (study group) students in two locations. The test has 4 scales and the high scores on the scale show that the frequency of the problem behavior conducted by the student is high; whereas low scores on the scale show that the problem behavior is rare or never conducted. Based on analyses, all the domain averages are over 2. This shows that teachers voted the frequency of behavior of learning disability high for children with LD.

Table 11. Means, standard deviations and minimum/maximum scores for the Learning Disabilities Screening Measure

Measure		Min	Max	Mean	(SD)
Screening					
1.	Academic	1.33	3.00	2.47	0.29
2.	Reading	1.90	2.90	2.48	0.19
3.	Visual	0.67	3.00	2.25	0.46
4.	Auditory	1.00	3.00	2.18	0.38
5.	Writing	1.89	3.00	2.46	0.21
6.	Arithmetic	1.33	3.00	2.43	0.37
7.	Study	1.60	3.00	2.37	0.30
8.	Organization	1.60	2.80	2.31	0.27
9.	Direction	1.43	3.00	2.26	0.33
10.	Tactile	1.00	3.00	2.26	0.56
11.	Sequencing	1.00	3.00	2.32	0.47
12.	Verbal	1.80	2.80	2.36	0.26
13.	Motor	1.40	2.80	2.20	0.28
14.	Social	1.92	2.63	2.34	0.16
15.	Action	1.00	3.00	2.21	0.43
16.	Attention	1.00	2.75	2.23	0.36
17.	Motivation	1.33	3.00	2.40	0.28

The correlation matrix among the domains of the Learning Disability Screening Measure for the LD group in two districts is shown in Table 12. The domains that correlated the most positively significant were reading-writing ($r=.27$, $n=120$, $p<.01$), writing-social ($r = .28$, $n=120$, $p<.01$), direction-social ($r = .36$, $n=120$, $p<.01$), reading-motivation ($r = .31$, $n=120$, $p<.01$), academic-attention ($r = .27$, $n=120$, $p<.01$), reading-arithmetic ($r = .22$, $n=120$, $p<.05$).

For the LD group in Esenyurt, Table 13 presents the correlation matrix. For children with LD who lived in this district, the domains that correlated the most positively significant were academic-attention ($r = .37$, $n=75$, $p<.01$), academic-study ($r = .32$, $n=75$, $p<.01$), arithmetic-attention ($r = .31$, $n=75$, $p<.01$), tactile-social ($r = .31$, $n=75$, $p<.01$), academic-reading ($r = .23$, $n=75$, $p<.05$) and academic-organization ($r = .26$, $n=75$, $p<.05$).

As for the LD group in Bakırköy, Table 14 shows the correlation matrix. The most significant positive correlations were found between study-organization ($r = .49$, $n=45$, $p<.01$), writing-social ($r = .43$, $n=45$, $p<.01$), reading-action ($r = .39$, $n=45$, $p<.01$), visual-organization ($r = .39$, $n=45$, $p<.01$).

Table 12. Correlation Matrix among domains of screening test for the total LD (study) group

Measure		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	Screening																	
1.	Academic		.07	.00	-.02	.02	.06	.20*	.16	-.05	-.09	-.01	-.11	-.22*	-.03	-.06	.27*	-.32*
2.	Reading			-.33**	.02	.27**	.22*	.01	-.23*	-.03	.03	.08	-.02	.08	-.11	.04	-.03	.31*
3.	Visual				-.11	-.12	-.09	.08	.09	.20*	-.13	-.02	-.06	-.02	-.06	.01	-.10	-.06
4.	Auditory					-.28**	-.13	.06	.03	-.27**	.18*	.04	.10	.06	-.09	.05	.04	.06
5.	Writing						.17	.05	.13	-.02	-.08	.13	-.05	-.06	.28**	-.09	.18*	-.05
6.	Arithmetic							.14	.09	-.08	.00	-.08	-.27**	-.21*	.02	.01	.23**	.01
7.	Study								.19*	-.31**	.02	-.11	-.15	.00	.10	.17	-.11	.07
8.	Organization									.04	.05	.01	-.11	-.01	-.04	-.03	-.13	-.06
9.	Direction										-.17	-.08	-.25	-.13	.36*	.17	-.06	-.15
10.	Tactile											-.22*	.07	.11	.25**	.13	-.06	.13
11.	Sequencing												-.09	.17	.05	-.05	.01	-.23**
12.	Verbal													.03	.05	-.25**	-.19*	-.15
13.	Motor														.13	-.01	-.10	.14
14.	Social															.10	-.05	.08
15.	Action																.00	.05
16.	Attention																	.01
17.	Motivation																	-

SCREENING (LEARNING DISABILITY SCREENING MEASURE- ÖĞRENME BOZUKLUĞU BELİRTİ TARAMA TESTİ

*p<0.05

**p<0.01

Table 13. Correlation Matrix among domains of screening test for the LD (study) group in Esenyurt

Measure		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Screening																		
1.	Academic		.23*	.06	-.13	-.01	.18	.32**	.26*	-.04	-.22	.13	-.20	-.38**	-.09	.14	.37**	-.47**
2.	Reading			.23*	-.38**	.15	.01	.05	-.01	.03	-.11	.09	-.14	.17	-.22	-.12	-.16	-.29*
3.	Visual				-.21	.04	.02	0.2	-.02	.26*	-.22	.18	-.23	-.05	.02	-.02	.00	.00
4.	Auditory					-.40**	.05	.02	.06	-.33	.22	.01	.07	.11	-.07	.00	.12	.13
5.	Writing						-.06	.02	.14	.04	-.10	-.02	-.19	-.02	.14	.01	.10	.01
6.	Arithmetic							.06	.16	-.06	-.09	-.31**	-.39**	-.40**	-.15	.19	.31**	-.04
7.	Study								.01	-.51**	-.05	-.40**	-.17	-.07	.04	.27*	.06	.22
8.	Organization									-.03	-.11	.20	-.04	-.15	-.17	0.1	.31**	-.32**
9.	Direction										.09	.25*	.09	-.06	-.13	-.16	-.03	-.13
10.	Tactile											-.23*	-.06	.24*	.31**	.16	-.11	.19
11.	Sequencing												.14	.07	.05	-.03	-.04	-.31**
12.	Verbal													.23	-.03	-.39**	-.33	-.20
13.	Motor														.26*	.00	-.12	.22
14.	Social															.15	-.15	.24*
15.	Action																.08	.06
16.	Attention																	.07
17.	Motivation																	-

SCREENING (LEARNING DISABILITY SCREENING MEASURE- ÖĞRENME BOZUKLUĞU BELİRTİ TARAMA TESTİ

*p<0.05

**p<0.01

Table 14. Correlation Matrix among domains of screening test for LD (study) group in Bakırköy

Measure		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	Screening																	
1.	Academic		-.01	-.17	.15	.13	-.03	.22	-.32**	-.13	.19	-.31**	-.20	.22	.24*	.06	-.07	-.07
2.	Reading			-.09	.03	.03	-.03	.09	.00	-.15	-.07	-.16	.19	.01	.18	.39**	-.41**	.31*
3.	Visual				-.04	-.22	-.09	.28	.39**	-.11	0.4	-.23	.24	.11	-.18	-.05	-.24	-.22
4.	Auditory					.14	-.12	.20	-.01	-.33*	.01	.26	.12	.03	-.05	.07	-.03	-.07
5.	Writing						.11	.10	.15	.20	.09	.08	.28	-.34*	.43**	-.06	.15	-.08
6.	Arithmetic							.21	.00	.12	.26	-.08	-.04	-.12	.16	-.16	-.01	.08
7.	Study								.49**	.06	.05	.16	-.11	.08	.17	.01	-.46**	-.15
8.	Organization									-.06	-.10	.10	-.03	.11	.04	-.20	-.21	-.06
9.	Direction										-.17	-.08	-.25	-.13	.36*	.17	-.06	-.15
10.	Tactile											-.19	.34*	-.12	.18	-.08	.11	-.02
11.	Sequencing												-.34*	.24	-.02	.08	-.02	-.15
12.	Verbal													-.27	.24	.21	.14	-.04
13.	Motor														-.13	.04	-.12	-.02
14.	Social															.11	0.6	-.20
15.	Action																-.12	.05
16.	Attention																	.15
17.	Motivation																	-

SCREENING (LEARNING DISABILITY SCREENING MEASURE- ÖĞRENME BOZUKLUĞU BELİRTİ TARAMA TESTİ

*p<0.05

**p<0.01

The Relationship Among the Perceptions of Children and the Perceptions of Their Teachers and Parents With Respect to Children's Perceived Quality of Life

The relationship among self-reported quality of life of the child with LD measured by KINDL-R child form, parent reported quality of life of the child with LD measured by KINDL-R parent and teacher reported quality of life of the child with LD measured by KINDL-R teacher was investigated using Pearson product-moment correlation coefficient. There was a significant positive correlation between the self-reported quality of the child with LD, measured KINDL-R child and parent reported quality of life of the child with LD measured by KINDL-R parent, ($r = .57$, $n=120$, $p<.01$) with moderate to high level of self-reported child quality of life and moderate to high level of parent reported child quality of life. However, significant relationships did not exist between the self-reported quality of life of the child with LD measured by KINDL-R child form and the teacher reported quality of life of the child with LD, measured KINDL-R teacher, ($r = .08$, $n=120$, $p>.01$). Similarly, there is not a significant relationship between the teacher reported quality of life of the child with LD measured by KINDL-R teacher and the parent reported quality of life of the child with LD measured by KINDL-R parent, $r=-.17$, $n=120$, $p>.01$ (Table 15).

Table 15. Correlation among KINDL-R total quality of life scores for the LD (study) sample

Measure		1	2	3
1.	KINDL-R-Kid	-	.57**	.08
2.	KINDL-R-Parent		-	-.17
3.	KINDL-R-Teacher			-

KINDL-R-Kid: Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Child form KINDL-R-Parent: Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Parent form: KINDL-R-Teacher: Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Teacher form
**p<0.01

Table 16. Correlation among KINDL-R total quality of life scores for the NLD (comparison) sample

Measure		1	2	3
1.	KINDL-R-Kid	-	.49**	.68**
2.	KINDL-R-Parent		-	.50**
3.	KINDL-R-Teacher			-

KINDL-R-Kid: Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Child form KINDL-R-Parent: Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Parent form: KINDL-R-Teacher: Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Teacher form
p<0.01

For the NLD group, the relationship among self-reported quality of life of the child without learning disability measured by KINDL-R child form, parent reported quality of life of the child without learning disability measured by KINDL-R parent and teacher reported quality of life of the child without learning disability measured by KINDL-R teacher was investigated using Pearson product-moment correlation coefficient. There was a significant positive correlation between the self-reported quality of the child without learning disability, measured KINDL-R child and parent reported quality of life of the child without

learning disability measured by KINDL-R parent, (r = .49, n=120, p<.01) with moderate to high level of self-reported child quality of life and moderate to high level of parent reported child quality of life. Similarly, significant positive relationship exists between the self-reported quality of life of the child without learning disability measured by KINDL-R child form and the teacher reported quality of life of the child without learning disability, measured by KINDL-R teacher, (r = .68, n=120, p<.01). To add, there is also a significant positive relationship between the teacher reported quality of life of the child without learning disability measured by KINDL-R teacher and the parent reported quality of life of the child without learning disability measured by KINDL-R parent,(r=.50, n=120, p<.01) (Table 16).

Table 17 presents the correlation matrix of the KINDL-R child form, KINDL-R parent form and KINDL-R teacher form for the LD group. Many of the total and domain scored correlated positively and significantly. The most significant domain correlations were observed between kid physical and parent physical (r=.43, n=120, p<.01), kid physical and kid emotional (r=.24, n=120, p<.01), kid emotional and parent emotional (r=.45, n=120, p<.01), kid self-esteem and parent self-esteem (r=.33, n=120, p<.01), kid family and parent family (r=.54, n=120, p<.01), teacher self-esteem and teacher school (r=.42, n=120, p<.01).

Table 18 shows all the correlations among all the KINDL-R instruments and their subscales for the NLD group. The domains that correlated significantly were kid physical-kid emotional (r=.79, n=120, p<.01), kid physical and kid self-esteem (r=.51, n=120, p<.01), kid physical and kid family (r=.72, n=120, p<.01), kid physical and kid school (r=.62, n=120, p<.01), kid physical and parent

physical (r=.25, n=120, p<.01), kid self-esteem and parent self-esteem (r=.25, n=120, p<.01), parent emotional and parent self-esteem (r=.48, n=120, p<.01), parent family-parent friends (r=.34, n=120, p<.01), teacher emotional and teacher self-esteem (r=.33, n=120, p<.01) and teacher friends-teacher school (r=.33, n=120, p<.01).

Table 17. Correlation Matrix among subtest scores of KINDL-R quality of life scores for the LD (study) group

Measure		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	KINDL-R-Kid																			
1.	Total		.49**	.61**	.55**	.58**	.52**	.25**	.57**	.46**	.36**	.39**	.47**	.23**	.06	.09	.05	.12	.07	-0.4
2.	Physical			.24**	.15	.03	.17	-.03	.19*	.43**	.17	.09	.01	.04	-0.3	.0.3	.17	.00	-0.5	-.05
3.	Emotional				.23*	.26**	.18*	-0.4	.53**	.41*	.45**	.33**	.35**	.29**	.01	-.19*	-.17	-.02	-.16	-0.6
4.	Self-esteem					.17	.13	-.03	.21*	.08	-.07	.33**	.26**	.13	-.06	.20*	.13	.01	.22*	.06
5.	Family						.16	-.04	.52**	.28**	.30**	.34**	.54**	.20*	.08	-.04	-.05	-.05	.12	-.15
6.	Friends							.00	.24**	.15	.15	.07	.20*	.25**	-.01	.06	-.04	.14	.13	-.09
7.	School								.01	.04	.07	-.03	-.01	-.24**	.19*	.24**	.12	.34**	-.07	.23*
	KINDL-R-Parent																			
8.	Total									.54**	.67**	.65**	.68**	.57**	.34**	-.17	-.08	-.15	-.08	-.09
9.	Physical										.43**	.17	.19*	.09	.13	-.16	.00	.04	-.19*	-.18
10.	Emotional											.27**	.31**	.28**	.09	-.17	-.11	-.03	-.19*	-.02
11.	Self-esteem												.43**	.29**	.01	-.06	.01	-.18*	-0.3	.04
12.	Family													.34**	-.08	-.06	.07	-.23*	.09	-.11
13.	Friends														.00	-.08	-.22*	-.15	.24**	-.14
14.	School															-.08	-.06	.09	.22*	.08
	KINDL-R-Teacher																			
15.	Total																.52**	.59**	.46**	.72**
16.	Emotional																	.07	-.14	.29**
17.	Self-esteem																		-.01	.42**
18.	Friends																			-.02
19.	School																			-

KINDL-R Child (Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Revised Version Child form), KINDL-R Parent (Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Revised Version Parent form), KINDL-R Teacher (Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Revised Version Teacher form),

*p<0.05

**p<0.01

Table 18. Correlation Matrix among subtests of KINDL-R quality of life scores for the NLD (comparison) group

Measure		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	KINDL-R-Kid																			
1.	Total		.87**	.85**	.74**	.87**	.67**	.78**	.49**	.37**	.15	.09	.53**	.17	.61**	.68**	.52**	.53**	.45**	.33**
2.	Physical			.79**	.51**	.72**	.48**	.62**	.36**	.25**	.14	-0.2	.37**	.11	.51**	.56**	.46**	.43**	.30**	.32**
3.	Emotional				.51**	.74**	.41**	.56**	.35**	.23*	.12	.13	.36**	.06	.44**	.51**	.35**	.48**	.25**	.31**
4.	Self-esteem					.53**	.54**	.47**	.53**	.43**	.08	.25**	.50**	.31**	.51**	.58**	.45**	.42**	.45**	.22*
5.	Family						.43**	.67**	.33**	.26**	.07	-.03	.38**	.00	.55**	.57**	.43**	.49**	.26**	.39**
6.	Friends							.41**	.51**	.33**	.22**	.23**	.43**	.39**	.42**	.44**	.32**	.24**	.48**	.14
7.	School								.34**	.31**	.09	-.11	.52**	.01	.47**	.61	.49**	.49**	.44**	.19*
	KINDL-R-Parent																			
8.	Total									.72**	.65**	.69**	.75**	.69**	.52**	.50**	.45**	.20*	.55**	.13
9.	Physical										.38**	.39**	.55**	.31**	.31**	.45**	.36**	.29**	.45**	.08
10.	Emotional											.48**	.36**	.49**	-.05	.12	.12	-.07	.32**	-.05
11.	Self-esteem												.30**	.51**	.17	.05	.11	.-.07	.19*	-.12
12.	Family													.34**	.42**	.57**	.50**	.31**	.48**	.25**
13.	Friends														.15*	.14**	.19*	-.12	.34**	-.04
14.	School															.61**	.47**	.43**	.42**	.33**
	KINDL-R-Teacher																			
15.	Total																.73**	.75**	.67**	.56**
16.	Emotional																	.33**	.36**	.25**
17.	Self-esteem																		.33**	.33**
18.	Friends																			.07
19.	School																			-

KINDL-R Child (Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Revised Version Child form), KINDL-R Parent (Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Revised Version Parent form), KINDL-R Teacher (Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Revised Version Teacher form),

*p<0.05

**p<0.01

The Relationship between Perceived Quality of Life of Children with LD and Perceived Quality of Life of Their Mothers

In this part, the relationship between the perceptions of the quality of life of the child and the perceived quality of life of the mothers who had children with LD was analyzed.

Table 19. Correlation Matrix among subtest scores of KINDL-R and WHOQOL-BREF for the LD (study) group in two districts

Measure		1	2	3	4	5	6	7	8
1.	KINDL-R-Kid (Total)	-	0.57**	.08	.44**	.47**	.40**	.33**	.29**
2.	KINDL-R-Parent (Total)			-.17	.50**	.39**	.37**	.35**	.36**
3.	KINDL-R-Teacher (Total)				-.12	-.21*	.02	.02	.00
4.	WHOQOL-BREF (Physical)					.57**	.41**	.46**	.41**
5.	WHOQOL-BREF (Psychological)						.47**	.35**	.31**
6.	WHOQOL-BREF (Social)							.34**	.28**
7.	WHOQOL-BREF (Environmental)								.97**
8.	WHOQOL-BREF (Social Pressure)								-

KINDL-R-Kid: Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Child form KINDL-R-Parent: Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Parent form: KINDL-R-Teacher: Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Teacher form WHOQOL-BREF: World Health Organization Quality of Life Assessment

*p<0.05

**p<0.01

For the LD group in both regions perceived quality of life of mothers of children with LD was measured through World Health Organization Quality of Life Assessment Turkish Form (WHOQOL-BREF-TR). The relationship among subscales of the WHOQOL-BREF and the total quality of life scores of children (perceived by themselves, their parents and teachers) were investigated through Pearson moment product correlation. There is a significant positive correlation

between the total quality of life score of the child (KINDL-R kid) and the physical, psychological, social, environmental and social pressure domains of (WHOQOL-BREF), (r=.44; .47; .40; .33; .39; n=120, p<.01, respectively). The perceptions of parents about the quality of life of their children, measured by KINDL-R parent significantly and positively correlated with all domains of mothers' quality of life scores measured by WHOQOL-BREF-TR (r=.50; .39; .37; .35; .36; n=120, p<.01, respectively). However, there are either no or negative correlations between the perceptions of teachers about the quality of life of their students (KINDL-R teacher) and the mothers' quality of life scores measured by WHOQOL-BREF-TR (Table 19).

Table 20. Correlation Matrix among subtest scores of KINDL-R and WHOQOL-BREF for the LD (study) group in Esenyurt

Measure		1	2	3	4	5	6	7	8
1.	KINDL-R-Kid (Total)	-	0.59**	.10	.57**	.51**	.40**	.47**	.45**
2.	KINDL-R-Parent (Total)			-.10	.63**	.40**	.48**	.45**	.45**
3.	KINDL-R-Teacher (Total)				-.10	-.09	-.18	-.03	-.02
4.	WHOQOL-BREF (Physical)					.68**	.63**	.56**	.53**
5.	WHOQOL-BREF (Psychological)						.55**	.47**	.41**
6.	WHOQOL-BREF (Social)							.45**	.39**
7.	WHOQOL-BREF (Environmental)								.97**
8.	WHOQOL-BREF (Social Pressure)								-

KINDL-R-Kid: Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Child form KINDL-R-Parent: Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Parent form: KINDL-R-Teacher: Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Teacher form WHOQOL-BREF: World Health Organization Quality of Life Assessment

*p<0.05

**p<0.01

The LD group in Esenyurt indicated similar correlations with the total LD group (Table 17). The relationship among subscales of the WHOQOL-BREF and the total quality of life scores of children (perceived by themselves, their parents and teachers) was investigated through Pearson moment product correlation. There is a significant positive correlation between the total quality of life score of the child (KINDL-R kid) and the physical, psychological, social, environmental and social pressure domains of (WHOQOL-BREF), (r=.57; .51; .40; .47; .45; n=75, p<.01, respectively). The perceptions of parents about the quality of life of their children, measured by KINDL-R parent significantly and positively correlated with all domains of mothers' quality of life scores measured by WHOQOL-BREF-TR (r=.63; .40; .48; .45; .45; n=75, p<.01, respectively). However, there are non-significant negative correlations between the perceptions

of teachers about the quality of life of their students (KINDL-R teacher) and the mothers' quality of life scores measured by WHOQOL-BREF-TR.

Table 21. Correlation Matrix among subtest scores of KINDL-R and WHOQOL-BREF for the LD (study) group in Bakırköy

Measure		1	2	3	4	5	6	7	8
1.	KINDL-R-Kid (Total)		0.44**	.28	-.14	.24	.40**	-.24	-.31*
2.	KINDL-R-Parent (Total)			-.23	-.13	.28	.09	-.11	-.03
3.	KINDL-R-Teacher (Total)				-.05	-.15	.37*	.03	-.08
4.	WHOQOL-BREF (Physical)					.00	-.21	.00	-.07
5.	WHOQOL-BREF (Psychological)						.28	-.01	.08
6.	WHOQOL-BREF (Social)							.02	.00
7.	WHOQOL-BREF (Environmental)								.92**
8.	WHOQOL-BREF (Social Pressure)								-

KINDL-R-Kid: Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Child form KINDL-R-Parent: Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Parent form: KINDL-R-Teacher: Questionnaire for Measuring Health-Related Quality of Life in Children and Adolescents – Teacher form WHOQOL-BREF: World Health Organization Quality of Life Assessment

*p<0.05

**p<0.01

For the LD group in Bakırköy, the relationship among subscales of the WHOQOL-BREF-TR and the total quality of life scores of children (perceived by themselves, their parents and teachers) was investigated through Pearson moment product correlation. The total quality of life of the child as perceived by himself or herself (KINDL-R Kid) positively and significantly correlated with the social domain of WHOQOL-BREF-TR, r=.40, n=45, p<.01. However, the total quality of life of the child as perceived by himself or herself (KINDL-R Kid) negatively and significantly correlated with the social pressure domain of WHOQOL-BREF, r=-.31, n=45, p<.05. The total quality of life of the child as perceived by parent

(KINDL-R parent) did not correlate with any domain of WHOQOL-BREF-TR. However, the total quality of life of the child as perceived by the teacher (KINDL-R teacher) positively correlated with the social domain of WHOQOL-BREF-TR, $r=.37$, $n=45$, $p<.05$.

CHAPTER 5

DISCUSSION

The discussion part of this study is presented under four main headings: (1) the purpose of the study, (2) review of findings, (3) implications of the study, and (4) conclusion and summary. Review of the findings is composed of the discussion of the research questions.

Purpose of the Study

The main purpose of the current study was to analyze the influence of having a learning disability on the perceived quality of life of children with LD. Therefore, the difference between the quality of life of children with and without LD was measured by the reports taken from the children themselves, their parents and their teachers. A secondary purpose of the study was to investigate the relationship between different perceptions of child's quality of life. Another secondary purpose was to analyze the relationship between quality of life of children with LD and quality of life of their mothers.

Review of Findings

Characteristics of children with LD

This part investigates the characteristics of children (aged 8-16) with LD focusing on their quality of life as perceived by their own, their teachers and their parents. The major findings of this study were:

- Quality of life of children with LD has been perceived lower than the quality of life of children with NLD by them, their mothers and teachers.

- Quality of life of children with LD has been perceived lower that the quality of life of children with NLD in both regions.
- Children with LD have lower levels of self-esteem, physical and psychological well-being compared to their peers with NLD.
- Children with LD have lower levels of satisfaction in their relations with family members, friends and school.
- Children with LD have been perceived to have serious problems in academic, reading, writing, arithmetic, study, organization and motivation skills.

Several studies in the literature have stated that learning disability has an effect on the quality of life of the child (Korkmazlar, 1999; Margai & Henry, 2003; Mendlowicz & Stein, 2000; Reiter & Bendov, 1996; Shin, 1998). The current study has shown results convenient to this literature. Comparisons of mean levels of quality of life scores for students with LD students with NLD revealed that children with LD reported lower levels of total and domain-based quality of life. In the current study, statistical analyses comparing students with LD to students with NLD on total and domain-based quality of life scores revealed significant differences between the two groups on perceptions of quality of life. It was found that children with LD had lower total quality of life scores as perceived by them, their parents and their teachers (mean=52.4, 56.1, 45.1, respectively) than children with NLD (mean=65.0, 65.2, 57.5, respectively). The significance of the difference was observed not only between the LD and NLD groups but also between the LD and NLD groups in Esenyurt and between the LD and NLD groups in Bakırköy. In addition, children who had learning disabilities in the total

sample (Esenyurt and Bakırköy) assessed their own quality of life significantly lower (mean=53.2 and 51.1 for Esenyurt and Bakırköy, respectively) than children with NLD (mean=71.7 and 53.9 for Esenyurt and Bakırköy, respectively). Similarly, in Esenyurt, parents (mean=56.8) and teachers (mean=43.4) of children with LD assessed the quality of life of their children/students significantly lower than parents (mean=65.6) and teachers (mean=60.8) of children with NLD. Similarly, in Bakırköy, parents (mean=54.9) and teachers (mean=48.1) of children with LD assessed the quality of life of their children/students significantly lower than parents (mean=64.4) and teachers (mean=52.1) of children with NLD.

Students with LD have usually been rated by their parents and teachers as displaying a number of maladaptive social skills as well as fewer adaptive social behaviors compared to their peers with NLD (Pearl & Bay, 1999). Children with LD have also been found to show less interpersonal understanding compared to their peers with NLD (Kuhne & Wiener, 2000). This study gave consistent results with the literature. Teachers and parents of children with LD rated the social emotional and personal skills lower than children with NLD. For example, parent perception on the quality of life of the child revealed that parents assessed their family relations of their children with LD (mean=63.1) school based-quality of life of their children with LD (mean=48.3) significantly lower than parents of children with NLD. Also, teacher perception about the quality of life revealed that teachers perceived their students with LD as lower in emotional well-being (mean=47.3) and self-esteem (mean=41.8) than children with NLD.

Studies of self-esteem detected differences between students with LD and students with NLD (Pearl & Bay, 1999). For example, Valas (1999) found adolescents with LD to have lower self-esteem than they peers with NLD. This study also revealed that children with LD had problems with self-esteem. For the NLD sample, children assessed their quality of life to be the highest in terms of self-esteem (mean=70.5) whereas the self-esteem of children with LD (49.8) rated significantly lower than their peers with NLD.

Considerable evidence in the literature shows that children and adolescents with LD differ from their peers with NLD with respect to behavioral, social emotional and personality variables. The differences in the functioning of children with LD reported in the literature supports the idea that quality of life of children with LD may differ from children with NLD (Huntington & Bender, 1993, Power, 2000). The current study displayed similar results with this literature in that all the domain scores in the perceived quality of life of children with LD were significantly lower than children with NLD.

In the literature, there have been various definitions of learning disabilities that emphasized the lowered school skills of children with LD (Fletcher, Foorman, Boudousquie, Barnes, Schatschneider & Francis, 2002, Korkmazlar, 1999; Mendlowicz & Stein, 2000). Similarly, Torgesen and Wong (1986), Gaddes (1985), Goldstein and Mather (2001) stated that school skills of children with LD are the most observable part of the disorder. In this study, characteristics of children with LD according to the evaluations of their teachers were identified by the Learning Disabilities Screening Measure and results were consistent with the literature. The results showed that teachers rated their students

with LD as having problems in school skills, specifically in reading (mean=2.48), academic (mean=2.47), writing (mean=2.46) and arithmetic (mean=2.43). Actually, children with LD were rated to have problems in all domains as far as the means are concerned (Table 11) because all the means of domains were over two, which is the sign of a difficulty.

When it comes to the correlations of the domains for the LD group in two regions, the strongest positive correlation between the direction domain and the social domain ($r=.36$, $p<.01$). For the LD group in Esenyurt, the strongest positive correlation between the academic domain and the attention domain ($r=.37$, $p<.01$) whereas the strongest positive correlation for the LD group in Bakırköy was between study skills domain and organization domain ($r=.49$, $p<.01$).

The finding that students with LD differ from students with NLD on quality of life domains of physical and emotional well-being, self-esteem, school, friends and family relations is somewhat expected given the social and emotional differences that are cited in the literature on students with LD. This is a negative finding for children diagnosed with LD.

The relationship among the perceptions of children and the perceptions of their parents and teachers with respect to children's perceived quality of life

This part investigates the relationship among the perceptions of the three groups (child, parent and teacher) related with the quality of life of the child. The second group of major findings of this study were:

- There is a statistically significant relationship between perceptions of children with LD and their parents about the children's quality of life. There are consistent perceptions by children and their parents about the

self-esteem level, physical and emotional well-being, school, family and friends relations of children.

- There is a relationship between perceptions of children with LD and their teachers about children's quality of life but the relationship is not statistically significant.
- There isn't a relationship between perceptions of parents and teachers about the quality of life of children with LD.
- There is a relationship among perceptions of children with NLD, their parents and teachers about children's quality of life. There are consistent perceptions by children and their parents about the self-esteem level, physical and emotional well-being, school, family and friends relations of children.

Several studies showed that (Kuhne & Wiener, 2000; Pearl & Bay, 1999; Power, 2000) perceived quality of life reflects subjective evaluations but consistency among these evaluations can be possible. Similarly, Deiner (1994) stated that there are advantages to using self-report methods to measure quality of life of children. Research with children has demonstrated that significant correlations between children's self-reports of quality of life and ratings of quality of life by significant others such as parents (Dennis, Williams, Giangreco & Cloninger, 1993; Gilman & Huebner, 1997).

In this study, results showed consistency with the literature and significant relationships were found between raters of child's quality of life. For example, perceptions of children and parents for the LD group significantly and positively correlated, ($r=.57$, $p<.01$) with the family domain correlating the highest ($r=.47$,

p<.01) and the school domain correlating the lowest (r=.06, p>.01). It means that when the self-reported total quality of life of the child with LD increases, the parent perception of the total child quality of life with LD also increases and vice versa. However, the same correlation was not found between the teacher and child perceptions and the teacher and parent perceptions. There might be several reasons for this. Firstly, subjective perceptions may lead to differences in perspectives. Secondly, level of awareness of LD might account for different perspectives and evaluations.

For the NLD children without any form of disability, all the perceptions about the quality of life of the child correlated with each other. The parent and child perceptions about the total quality of life of the child (r=.49, p<.01), with the school domain correlating the highest (r=.61, p<.01) and the self-esteem domain correlating the lowest (r=.09, p>.01). Teacher and child perceptions about the total quality of life of the child (r=.68, p<.01) [(with the self-esteem domain correlating the highest (r=.53, p<.01) and the school domain correlating the lowest (r=.33, p<.01)] and parent and teacher perceptions about the child (r=.50, p<.01) [(with the friends domain correlating the highest (r=.45, p<.01) and the school domain correlating the lowest (r=.08, p>.01)] correlated positively and significantly with each other. This shows a consistency among different perceptions of the child quality of life.

For the total sample, all the perceptions about the quality of life of the child correlated with each other as well. The parent and child perceptions about the total quality of life of the child (r=.62, p<.01) [(with the physical domain correlating the highest (r=.52, p<.01) and the friends domain correlating the

lowest (r=.29, p<.01)], teacher and child perceptions about the total quality of life of the child (r=.67, p<.01) [(with the self-esteem domain correlating the highest (r=.60, p<.01) and the school domain correlating the lowest (r=.33, p<.01)] and parent and teacher perceptions about the child (r=.47, p<.01) [(with the self-esteem domain correlating the highest (r=.41, p<.01) and the school domain correlating the lowest (r=.11, p>.01)] correlated positively and significantly with each other. This shows a consistency among different perceptions of the child quality of life.

The relationship between perceived total quality of life of children with LD and the perceived quality of life of their mothers

This part investigates the relationship between quality of life of the child measured by KINDL-R scales and the quality of life of mothers of children with LD measured by WHOQOL-BREF-TR. The third group of major findings of this study were:

- There is a significant positive relationship between the quality of life of the child with LD and his/her mother's quality of life.
- Mothers of children with LD perceived their physical and psychological well-being, environmental conditions and social relations as related to their children's quality of life.
- There is a significant relationship between parent's perception of the child's quality of life and mother's perception of her own quality of life.

In literature, there has been strong evidence that mothers of children with LD also experience the stress of the difficulty which their children experience. While the child experiences difficulties in learning situations and other social

environment such as in the family and school, mothers also feel different responsibilities towards their children (Ellis & Hirsch, 2000). These responsibilities might sometimes cause feelings of guilt, depression and undermine their social relationships of mothers. Mothers of children with LD generally show a variety of problems in cognitive, linguistic and social functioning when compared to mothers of children with NLD (Glidden & Schoolcraft, 2003). Mothers of children with LD, while experience these problems, are affected in terms of their quality of life. Negatively affected quality of life of mothers results in a decreased sense of well-being with a relation to their perceptions and ability to function (Bumin, Gunal & Tukel, 2008).

In this study, comparison of the quality of life of children with LD and their mothers revealed consistent results with the literature. For example, in the LD sample in both regions, child's perception of his/her quality of life significantly correlated with the domains of the quality of life of mothers (Table 19). As stated in the literature (Bumin, Gunal & Tukel, 2008; Ellis & Hirsch, 2000; Glidden & Schoolcraft, 2003; Smith, Innocenti, Boyce & Smith 1993) an increased level of the child self-perceived child quality of life increased the perceived quality of life of mothers and vice versa. Child's perception about his/her quality of life positively and significantly correlated with all domains of quality of life of the mother [(with the psychological domain correlating the highest ($r=.47$, $p<.01$) and the social pressure domain correlating the lowest ($r=.29$, $p<.01$)]. For the LD group in which mothers also assessed their own quality of life, positive and significant relationships were found between the perceptions of parents about the quality of life of the child with LD and the

perceptions of mothers about the quality of life of mothers [(with the physical domain correlating the highest (r=.50, p<.01) and the environmental domain correlating the lowest (r=.35, p<.01)]. This means that, whether the father or mother assesses the quality of life of the child, the perception of the parent about the quality of the child increases when the perception of the mother about her quality of life increases and vice versa.

When it comes to the LD sample in Esenyurt, the child perception of his/her quality of life significantly correlated with the domains of the quality of life of mothers(Table 20). An increased level of the child self-perceived child quality of life increased the perceived quality of life of mothers and vice versa. Child's perception about his/her quality of life positively and significantly correlated with all domains of quality of life of his/her mother [(with the physical domain correlating the highest (r=.57, p<.01) and the social domain correlating the lowest (r=.29, p<.01)]. For the LD group in which mothers also assessed their own quality of life, positive and significant relationships were found between the perceptions of parents about the quality of life of the child with LD and the perceptions of mothers about the quality of life of mothers as well [(with the physical domain correlating the highest (r=.63, p<.01) and the psychological domain correlating the lowest (r=.40, p<.01)]. This means that, whether the father or mother assesses the quality of life of the child, the perception of the parent about the quality of the child increases when the perception of the mother about her quality of life increases and vice versa.

However, the LD sample shows differences from the Esenyurt and total LD sample in that the self-perception of the child quality of life significantly and

positively correlated with only the social domain (r=.40, p<.01). However, there was a negative significant relationship between the self-perception of the child quality of life and the social pressure domain of the mother quality of life (r=-.31, p>.05). It means that self-perception of the child quality of life as lower, decreases the social pressure of the mother. Mothers of LD in Bakırköy might evaluate having a child with LD as a means of lowering social pressure (Table 21).

Implications of the Study

Implications for Practice

This study has implications for the assessment of quality of life of students with LD. Three main scales were used in this study. Two of the scales, KINDL-R and WHOQOL-BREF, had Turkish standardizations and proved satisfactory psychometric properties. The Learning Disability Screening Measure is a Turkish measure which is widely used. The availability of reliable and valid instruments to assess several domains of quality of life is important in evaluations (Seeman, 1989). Perceptions of quality of life based on self-perceptions and perceptions of significant others allow for a more comprehensive assessment of students with LD.

A second implication of this study is that perceptions of quality of life reported by students with LD are compared with students with NLD. Results of the study have shown negative outcomes for students with LD in terms of their subjective quality of life. Students with LD significantly differed from their peers with NLD in reports of overall quality of life and domain-based quality of life. Many studies that have analyzed children with LD on indicators of quality of life show that students with LD differ from students with NLD in terms of social

emotional variables (Greenham, 1999). For example, studies have found that students with LD demonstrate more social difficulties, school problems and have higher levels of emotional difficulties. The similarity in the findings of this study with other studies' findings underlines the importance of assessing indicators of quality of life of children with LD. Information received from children with LD with respect to their satisfaction with school, friends, family and other areas of life provides a way for researchers to target certain areas where interventions may be needed to improve the quality of life of children with LD.

The last implication of this study involves the relationship between students with LD and their schools. The findings of this study show that for students with LD, school experiences of children with LD are related to lower school-based quality of life. In other words, students with LD experience worrying about school, being ignored by teachers, anxiety of getting low exam scores and being neglected by friends more in the school. It may be assumed that students who experience these feelings have lower satisfaction with school life and lowered quality of life at school. As a result, this finding is important because it alerts researchers, practitioners, and school personnel to the relationship between schools and students with LD.

Implications for Future Research

The currents study investigated perceptions of total and domain-based quality of life. However, future research might include additional indicators of quality of life. In addition, studies that aim at analyzing students with LD should consider investigating subtypes of LD. There is evidence from literature that students with

non-verbal learning disabilities are at greater risk of difficulties (Greenham, 1999). Therefore, future research might consider non-verbal LD as well.

Sample in the current study included children already diagnosed with a learning disability. However, there is evidence that diagnosis may not be conducted as well as to locate a learning disability (Korkmazlar, 1999). Therefore, future studies might focus on careful diagnosis of LD.

Results of the current study cannot be generalized to all children in Istanbul although the number of children who participated in this study (N=240) was satisfactory. Further research is recommended to cover more children. In addition, students were selected from two regions. More variation in the locations is recommended for future research.

Next, all the students with LD who participated in the study were having special education. However, more studies focusing on children who have not been diagnosed with an LD but show the symptoms of LD who are not having special education are recommended for future research.

Finally, there was not a teacher form in order to evaluate the quality of life of the child so the researcher developed a teacher-reported quality of life of the child form out of the KINDL-R parent form. Usage of a standardized teacher form might be more appropriate to use in such studies.

Conclusion and Summary

The main purpose of the current study was to analyze the influence of having a learning disability on the perceived quality of life of children (aged 8-16). Therefore, the effect of having a learning disability on the quality of life of children was measured between the LD (study) and the NLD (comparison) group

through the reports taken from the children themselves, their parents and their teachers. When the group of children with LD was compared with the group of NLD children, significant differences were found favoring comparison group students in terms of higher quality of life. The differences between groups were found in both districts.

In addition, students with LD were assessed by themselves, their parents and their teachers to possess lower quality of life and having more difficulties in their family, school and friend relations, self-esteem, physical and psychological well-being.

Quality of life of mothers of children with LD was also assessed and correlated with the quality of life of children with LD. It was found that perception of the children about their own quality of life was significantly related by the perception of the mother about her quality of life. Similarly, perception of the children about their own quality of life significantly related the perception of the mother about her quality of life.

Children's quality of life was assessed by their teachers at schools and it was found that teachers evaluated the quality of life of children with LD lower than the quality of life of children without disability. In addition, school skills were found out to be the most problem areas as children's learning disability symptoms were screened by teachers.

In the literature, studies showed that children with LD were affected by the disability (Toposki et al., 2004; Higginson et al, 2003; Silver, 1989). The results of the current study show that children with LD experience difficulties in their academic skills, family relations, social skills, psychological well-being, self-

esteem and physical well-being. Significant relationships were found between the children with LD and those without disability in terms of their quality of life scores. It is also important that children with LD had lower quality of lives regardless of the influence of other factors (such as income level and gender). Similarly, perceptions of their mothers and teachers also showed consistencies in that they were also aware of the difficulties learning disability places on the children. As a result, the current study shows the picture of LD and calls for applications of interventions as early as possible in the defined domains of life because the continuity of problems may lead to difficulties in life domains (Bagwell, Molina, Pelham & Hoza, 2001).

In this study, many parents were found out to be unaware of the difficulties experienced by children with LD. Parental help is very important for children with LD because setting interaction with them and giving the necessary help is very important. This study showed that mothers' perceptions of their quality of life are closely related with the perceptions of their children. Therefore, it can be predicted that development of mothers may also positively prompt the development of the child. When it comes to school, children with LD experience many difficulties at schools (Shin, 1998) starting with academic problems and influencing social-emotional and even physcial problems. The current study showed these difficulties to be experienced at schools and calls for taking measures for diagnosing and applying intervention programs for children with LD.

Taking the results of the study into consideration with respect to the counseling aspect, it is possible to propose psychological, psychosocial and educational interventions for children with LD.

First of all, the knowledge base of the society about learning disabilities is limited. As a result, awareness of people of learning disabilities might increase through social interventions such as seminars or more extensive use of publications. Next, teachers can learn as much as they can about the different types of learning disabilities. The resources and organizations they engage in can help them identify specific techniques and strategies to support students educationally. In addition, review of the student's evaluation records to identify where specifically the student has trouble might help educators and counselors to determine key points. Talking to specialists at schools (e.g. special education teacher) about methods for teaching students might be useful. Necessary provision of instruction and accommodations to address the student's special needs must be ensured. Parents of children with LD should be called to set permanent contact with the teachers and counselors.

Parents of children with LD should also engage in activities to increase their knowledge base and learn as much as they can about learning disabilities. Parents should help the child locate the way he or she learns the best and make homework one of the priorities. Parents should be open to counseling, which can help their children deal with frustration, feel better about him or her, and learn more about social skills. Parents should benefit from technological facilities when they need. They might try developing educational plans to address their children's

needs. Lastly, through regular communication, they should exchange information about their children's progress at home and at school.

APPENDICES

APPENDIX A

APPENDIX B

APPENDIX C

ARAŞTIRMA AMAÇLI ÇALIŞMA İÇİN ONAM FORMU

Araştırmacının açıklaması

8-16 yaş arası okul dönemindeki çocukların öğrenme güçlükleri üzerine bir araştırma gerçekleştirmekteyiz. Öğrenme güçlükleri çocukların okul hayatındaki başarıları ve ilerideki sosyal hayat becerileriyle çok yakından ilişkilidir; dolayısıyla erken dönemde ortaya çıkarılmaları önemlidir. Bu çalışma da, bu amaçla Türkiye'de yürütülen önemli araştırmalardan biridir. Bu mektubu, sizden bu önemli çalışmaya katılmanızı rica etmek için yazıyoruz. Bu önemli çalışmada bize yardımcı olmak isterseniz lütfen ekteki formu okuyup imzalayınız. İlköğretim dönemindeki çocukların öğrenme güçlükleri ve ebeveyn davranışları üzerine yürüttüğümüz bu önemli çalışmaya katılarak vereceğiniz destek bizim için çok değerlidir.

Katılımcının Beyanı

Halis SAKIZ tarafından bir araştırma yapılacağı belirtilerek bu araştırma ile ilgili yukarıdaki bilgiler bana aktarıldı. Bu bilgilerden sonra böyle bir araştırmaya "katılımcı" olarak davet edildim. Projenin yürütülmesi sırasında herhangi bir sebep göstermeden araştırmadan çekilebilirim. Araştırma için yapılacak harcamalarla ilgili herhangi bir parasal sorumluluk altına girmiyorum. Bana da bir ödeme yapılmayacaktır. Bu araştırmaya katılmak zorunda değilim ve katılmayabilirim. Ancak, bu konuda yapılan daveti büyük bir memnuniyet ve gönüllülük içerisinde kabul ediyorum.

İmzalı bu form kâğıdının bir kopyası bana verilecektir.

Katılımcı

Adı, soyadı:

Velisi

Adı soyadı:

İmza

APPENDIX D

GENEL BİLGİ FORMU

Çalışmaya Katılan Çocuk ile İlgili Sorular:

1. Doğum tarihi: Gün____ Ay_____ Yıl_____

2. Cinsiyeti (lütfen işaretleyiniz): Erkek____ Kız____

3. Çocuğunuzun kaçıncı sınıfta olduğunu lütfen belirtiniz:_____

4. Son dönemdeki sınıf başarı ortalamasını belirtiniz: _____

5. Lütfen kardeş sayısını belirtiniz:_____

6. Öğrencinin veya aileden birinin önemli bir sağlık sorunu olup olmadığını lütfen belirtiniz.

_____

7. Çocuğunuzun ruh sağlığına dayalı bir rahatsızlık tanısı olup olmadığını lütfen belirtiniz.

_____

8. Çocuğunuz çoğunlukla hangi elini kullanmaktadır?

Sağ{ } Sol{ }

9. Çocuğunuz okul dışında herhangi bir işte çalışıyor mu?

Hayır { }

Evet { }. Yaptığı iş _____

Çocuğun Ailesi ile İlgili Sorular :

1. Anne ile baba birlikte aynı evi paylaşıyorlar { }

2. Anne ile baba boşanmış { }

3. Anne ile baba boşanmışsa çocuk kiminle yaşıyor lütfen belirtiniz._____

4.Ailenin aylık ortalama gelirini lütfen belirtiniz_____

Çocuğun Babası ile İlgili Sorular:

1. Baba hayatta mı? Evet { } Hayır { }

2. Babasının yaşı _____.

3. Babanın mesleği: _____(işsiz ise, lütfen her zamanki mesleğini yazınız)

4. Babanın eğitimi (geldiği en yüksek düzey; lütfen birini işaretleyiniz.)

Okur-yazar değil{ } Okur-yazar{ } İlkokul{ }

İlkokul terk{ }

Ortaokul{ } Lise{ } Diğer{ }

Çocuğun Annesi ile İlgili Sorular:

1. Anne hayatta mı? Evet { } Hayır { }

2. Annesinin yaşı _____.

3. Annenin mesleği: _____(işsiz ise, lütfen her zamanki mesleğini yazınız)

4. Annenin eğitimi (geldiği en yüksek düzey; lütfen birini işaretleyiniz).

Okur-yazar değil{ } Okur-yazar{ } İlkokul{ }

İlkokul terk{ }

Ortaokul{ } Lise{ } Diğer{ }

APPENDIX E

Sıra No:…….

KINDL 8-11 YAŞ ÇOCUK ANKETİ

Senden son haftalarda neler hissettiğini öğrenmek istiyoruz ve bu amaçla yanıtlamanı istediğimiz birkaç soru hazırladık. Lütfen her bir soruyu dikkatle oku. Son haftalarda boyunca seninle ilgili olan şeyleri düşün. Her satırda sana en uygun gelen yanıtı seç ve altındaki kutucuğa çarpı işareti koy.
Doğru veya yanlış yoktur. Sadece senin ne düşündüğün önemli.

Örneğin:	Hiçbir zaman	Nadiren	Bazen	Sıklıkla	Her zaman
Son haftalarda canım müzik dinlemek istedi.	□	□	□	X	□

Son haftalarda	Hiçbir zaman	Nadiren	Bazen	Sıklıkla	Her zaman
1. Kendimi hasta hissettim.	□	□	□	□	□
2. Baş ağrım veya karın ağrım oldu.	□	□	□	□	□
3. Yorgun ve bitkindim.	□	□	□	□	□
4. Kendimi güçlü ve enerji dolu hissettim.	□	□	□	□	□
5. Eğlendim ve çok güldüm.	□	□	□	□	□
6. Canım sıkıldı.	□	□	□	□	□
7. Kendimi yalnız hissettim.	□	□	□	□	□
8. Korktum.	□	□	□	□	□
9. Kendimle gurur duydum.	□	□	□	□	□
10.Kendimi her şeyden üstün hissettim.	□	□	□	□	□
11.Kendimden hoşnutluk duydum.	□	□	□	□	□
12.Birçok güzel düşüncem vardı.	□	□	□	□	□
13.Annem ve babamla aram iyiydi.	□	□	□	□	□
14.Evde kendimi iyi hissettim.	□	□	□	□	□
15.Evde tartıştık.	□	□	□	□	□
16.Annem ve babam bazı şeyleri yapmamı engellediler.	□	□	□	□	□
17.Arkadaşlarımla oynadım.	□	□	□	□	□
18.Diğer çocuklar benden hoşlandılar.	□	□	□	□	□
19.Arkadaşlarımla iyi geçindim.	□	□	□	□	□
20.Kendimi diğer çocuklardan farklı hissettim.	□	□	□	□	□

Okulda olduğum son haftalarda	Hiçbir zaman	Nadiren	Bazen	Sıklıkla	Her zaman
21. Okul ödevimi yapmak kolaydı.	□	□	□	□	□
22. Derslerden hoşlandım.	□	□	□	□	□
23. Önümüzdeki haftaların gelmesini dört gözle bekledim.	□	□	□	□	□
24. Zayıf notlar almaktan korktum.	□	□	□	□	□

Cinsiyetim: ☐ Erkeğim ☐ Kızım

Yaşım: _____

Bugünün tarihi: _____

APPENDIX F

Sıra No:…….

KINDL 12-16 YAŞ ERGEN ANKETİ

Senden son haftalarda neler hissettiğini öğrenmek istiyoruz ve bu amaçla yanıtlamanı istediğimiz birkaç soru hazırladık. Lütfen her bir soruyu dikkatle oku. Son haftalarda seninle ilgili olan şeyleri düşün. Her satırda sana en uygun gelen yanıtı seç ve altındaki kutucuğa çarpı işareti koy.
Doğru veya yanlış yoktur. Sadece senin ne düşündüğün önemli.

Örneğin:	Hiçbir zaman	Nadiren	Bazen	Sıklıkla	Her zaman
Son haftalarda canım müzik dinlemek istedi.	□	□	□	X	□

Son haftalarda	Hiçbir zaman	Nadiren	Bazen	Sıklıkla	Her zaman
1. Kendimi hasta hissettim.	□	□	□	□	□
2. Ağrım oldu.	□	□	□	□	□
3. Yorgun ve bitkindim.	□	□	□	□	□
4. Kendimi güçlü ve enerji dolu hissettim.	□	□	□	□	□
5. Eğlendim ve çok güldüm.	□	□	□	□	□
6. Canım sıkıldı.	□	□	□	□	□
7. Kendimi yalnız hissettim.	□	□	□	□	□
8. Korktum veya kendime güvenimi kaybettim.	□	□	□	□	□
9. Kendimle gurur duydum.	□	□	□	□	□
10.Kendimi her şeyden üstün hissettim.	□	□	□	□	□
11.Kendimden hoşnutluk duydum.	□	□	□	□	□
12.Birçok güzel düşüncem vardı.	□	□	□	□	□
13.Annem ve babamla aram iyiydi.	□	□	□	□	□
14.Evde kendimi iyi hissettim.	□	□	□	□	□
15.Evde birileriyle tartıştım.	□	□	□	□	□
16.Annem ve babam tarafından kısıtlandığımı hissettim.	□	□	□	□	□
17.Arkadaşlarımla birlikte bir şeyler yaptık.	□	□	□	□	□
18.Arkadaşlarımın arasında başarılıydım.	□	□	□	□	□
19. Arkadaşlarımla iyi geçindim.	□	□	□	□	□
20. Kendimi diğer arkadaşlarımdan farklı hissettim.	□	□	□	□	□

Okulda olduğum son haftalarda	Hiçbir zaman	Nadiren	Bazen	Sıklıkla	Her zaman
21. Okul ödevlerini başarıyla yaptım.	□	□	□	□	□
22. Ders ilgimi çekti.	□	□	□	□	□
23. Okulda bundan sonra geçireceğim günler beni kaygılandırıyor (endişelendiriyor).	□	□	□	□	□
24. Zayıf notlar almaktan korktum.	□	□	□	□	□

Cinsiyetim: ☐ Erkeğim ☐ Kızım

Yaşım: _____

Bugünün tarihi: _____

APPENDIX G

Sıra No:…

ÇOCUKLAR VE ERGENLER İÇİN YAŞAM KALİTESİ ANKETİ
8-16 yaş Aile Formu KINDL

Sayın anne-baba,
Çocuğunuzun iyilik durumu ve yaşam kalitesi hakkında bu ankette belirteceğiniz kendi görüşleriniz çok önemli olduğundan lütfen anketi çocuğunuza sormadan kendiniz doldurunuz.
Lütfen her soruyu dikkatle okuyunuz ve çocuğunuzun son haftalarda kendini nasıl hissettiğini düşününüz.
Her satırda sizin için doğru ve çocuğunuz için uygun olan cevabın altındaki kutucuğu işaretleyiniz.

Örneğin:	Hiçbir zaman	Nadiren	Bazen	Sıklıkla	Her zaman
Çocuğum iyi uyudu.	□	□	□	X	□

Son haftalarda	Hiçbir zaman	Nadiren	Bazen	Sıklıkla	Her zaman
1. Çocuğum kendini hasta hissetti.	□	□	□	□	□
2. Çocuğumun baş ağrısı veya karın ağrısı oldu.	□	□	□	□	□
3. Çocuğum yorgun ve bitkindi.	□	□	□	□	□
4. Çocuğum kendini güçlü ve enerji dolu hissetti.	□	□	□	□	□
5. Çocuğum eğlenip çok güldü.	□	□	□	□	□
6. Çocuğumun canı herhangi bir şey yapmak istemedi.	□	□	□	□	□
7. Çocuğum kendini yalnız hissetti.	□	□	□	□	□
8. Çocuğum korku duydu veya kendinden emin olamadı.	□	□	□	□	□
9. Çocuğum kendisiyle gurur duydu.	□	□	□	□	□
10.Çocuğum kendini her şeyden üstün hissetti.	□	□	□	□	□
11.Çocuğum kendinden memnundu.	□	□	□	□	□
12.Çocuğumun birçok güzel düşüncesi vardı.	□	□	□	□	□
13.Çocuğum anne ve babası olarak bizlerle iyi geçindi.	□	□	□	□	□
14.Çocuğum evde kendini iyi hissetti.	□	□	□	□	□

15.Çocuğum evde bizlerle tartıştı.	□	□	□	□	□
16.Çocuğum bizim kendisine hükmettiğimizi düşündü.	□	□	□	□	□
	Hiçbir zaman	Nadiren	Bazen	Sıklıkla	Her zaman
17.Çocuğum arkadaşlarıyla birlikte zaman geçirdi.	□	□	□	□	□
18.Diğer çocuklar çocuğumdan hoşlandılar.	□	□	□	□	□
19.Çocuğum arkadaşlarıyla iyi geçindi.	□	□	□	□	□
20.Çocuğum kendini diğer çocuklardan farklı hissetti.	□	□	□	□	□

Çocuğumun okulda olduğu son haftalarda	Hiçbir zaman	Nadiren	Bazen	Sıklıkla	Her zaman
21. Çocuğum okulda verilen ödevlerle kolayca başa çıkabildi.	□	□	□	□	□
22. Çocuğum okuldaki derslerden hoşnuttu.	□	□	□	□	□
23. Çocuğum gelecek hakkında kaygılıydı.	□	□	□	□	□
24. Çocuğum okulda kötü not alma korkusu vardı.	□	□	□	□	□

Çocuğum: ☐ Erkek ☐ Kız

Çocuğumun yaşı: _____

Bugünün tarihi: _____

APPENDIX H

Sıra No:…

ÇOCUKLAR VE ERGENLER İÇİN YAŞAM KALİTESİ ANKETİ
8-16 yaş Öğretmen Formu KINDL

Sayın öğretmenim,
Öğrencinizin iyilik durumu ve yaşam kalitesi hakkında bu ankette belirteceğiniz kendi görüşleriniz çok önemli olduğundan lütfen anketi öğrenciniz ve ailesine sormadan kendiniz doldurunuz.
Lütfen her soruyu dikkatle okuyunuz ve öğrencinizin son haftalarda kendini nasıl hissettiğini düşününüz.
Her satırda sizin için doğru ve çocuğunuz için uygun olan cevabın altındaki kutucuğu işaretleyiniz.

Örneğin:	Hiçbir zaman	Nadiren	Bazen	Sıklıkla	Her zaman
Öğrencim mutluydu.	□	□	□	X	□

Son haftalarda	Hiçbir zaman	Nadiren	Bazen	Sıklıkla	Her zaman
1. Öğrencim eğlendi ve çok güldü.	□	□	□	□	□
2. Öğrencimin canı herhangi bir şey yapmak istemedi.	□	□	□	□	□
3. Öğrencim kendini yalnız hissetti.	□	□	□	□	□
4. Öğrencim korku duydu veya kendinden emin olamadı.	□	□	□	□	□
5. Öğrencim kendisiyle gurur duydu.	□	□	□	□	□
6.Öğrencim kendini arkadaşlarından üstün gördü.	□	□	□	□	□
7.Öğrencim kendinden memnundu.	□	□	□	□	□
8.Öğrencimin birçok güzel düşüncesi vardı.	□	□	□	□	□
9.Öğrencim arkadaşları ile birlikte zaman geçirdi.	□	□	□	□	□
10.Başka öğrenciler öğrencim ile vakit geçirmekten hoşlandılar.	□	□	□	□	□
11.Öğrencim arkadaşlarıyla iyi geçindi.	□	□	□	□	□
12.Öğrencim kendini diğer öğrencilerden farklı hissetti.	□	□	□	□	□

Öğrencimin okulda olduğu son haftalarda	Hiçbir zaman	Nadiren	Bazen	Sıklıkla	Her zaman

13. Öğrencim okulda verilen ödevlerle başa çıkabildi.	□	□	□	□	□
14. Öğrencim okuldaki derslerden hoşnuttu.	□	□	□	□	□
15. Öğrencim gelecek hakkında kaygılıydı.	□	□	□	□	□
16. Öğrencim okulda başarısız olmaktan korktu.	□	□	□	□	□

Öğrencim: ☐ Erkek ☐ Kız

Öğrencimin yaşı: _____
Bugünün tarihi: _____

APPENDIX I

WHOQOL-BREF Sıra no:

YÖNERGE: Bu anket sizin yaşamınızın kalitesi, sağlığınız ve yaşamınızın öteki yönleri hakkında neler düşündüğünüzü sorgulamaktadır. Lütfen bütün soruları cevaplayınız. Eğer bir soruya hangi cevabı vereceğinizden emin olamazsanız, lütfen size en uygun görünen cevabı seçiniz. Yaşamınızın son dört haftasını dikkate almanızı istiyoruz. Örneğin bir soruda son dört hafta kastedilerek şöyle sorulabilir:

	Hiç	Çok az	Orta derecede	Çokça	Tamamen
1. Sağlık ile ilgili ihtiyacınız olan desteği başkalarından alabiliyor musunuz?	1	2	3	4	5

Son dört hafta boyunca başkalarından aldığınız desteğin miktarını en iyi karşılayan rakamı yuvarlağa almalısınız. Buna göre, eğer başkalarından çokça yardım aldıysanız 4 rakamını yuvarlağa almanız gerekiyor. Son dört hafta içinde, ihtiyacınız olan desteği başkalarından hiç almadıysanız, 1 rakamını yuvarlağa almalısınız. Lütfen her soruyu okuyunuz, duygularınızı değerlendiriniz ve her bir sorunun ölçeğinde size en uygun olan yanıtın rakamını yuvarlağa alınız.

	Çok kötü	Biraz kötü	Ne iyi, ne kötü	Oldukça iyi	Çok iyi
1. Yaşam kalitenizi nasıl buluyorsunuz?	1	2	3	4	5

	Hiç hoşnut değil	Çok az hoşnut	Ne hoşnut, ne değil	Epeyce hoşnut	Çok hoşnut
2-Sağlık durumunuzdan ne kadar hoşnutsunuz?	1	2	3	4	5

Aşağıdaki sorular son dört hafta içinde kimi şeyleri ne kadar yaşadığınızı soruşturmaktadır.

	Hiç	Çok az	Orta derecede	Çokça	Aşırı derecede
3-Ağrılarınızın yapmanız gerekenleri ne kadar engellediğini düşünüyorsunuz?	1	2	3	4	5
4-Günlük uğraşılarınızı yürütebilmek için herhangi bir tıbbi tedaviye ne kadar ihtiyaç duyuyorsunuz?	1	2	3	4	5
5-Yaşamaktan ne kadar keyif alırsınız?	1	2	3	4	5
6-Yaşamınızı ne ölçüde anlamlı buluyorsunuz?	1	2	3	4	5
7-bir iş yaparken dikkatinizi toplamada ne kadar başarılısınız?	1	2	3	4	5
8-Günlük yaşamınızda kendinizi ne kadar güvende hissediyorsunuz?	1	2	3	4	5
9-Fiziksel çevreniz ne ölçüde sağlıklıdır?	1	2	3	4	5

Aşağıdaki sorular son dört haftada kimi şeyleri ne ölçüde tam olarak yaşadığınızı ya da yapabildiğinizi soruşturmaktadır.

	Hiç	Çok az	Orta derecede	Çokça	Tamamen

10-Günlük yaşamı sürdürmek için yeterli fiziksel gücünüz ve kuvvetiniz var mı?	1	2	3	4	5
11-Bedensel görünüşünüzü kabullenir misiniz?	1	2	3	4	5
12-İhtiyaçlarınızı karşılamaya yeterli paranız var mı?	1	2	3	4	5
13-Günlük yaşamınızda size gerekli bilgi ve haberlere ne ölçüde ulaşıyorsunuz?	1	2	3	4	5
14-Boş zamanları değerlendirme uğraşları için ne ölçüde fırsatınız olur?	1	2	3	4	5

Aşağıdaki sorularda son dört hafta boyunca yaşamınızın çeşitli yönlerini ne ölçüde iyi ya da doyurucu bulduğunuz sorulmaktadır.

	Çok kötü	Biraz kötü	Ne iyi, ne kötü	Oldukça iyi	Çok iyi
15-Bedensel hareketlilik (etrafta dolaşabilme, bir yerlere gidebilme) beceriniz nasıldır?	1	2	3	4	5

	Hiç hoşnut değil	Çok az hoşnut	Ne hoşnut, ne değil	Epeyce hoşnut	Çok hoşnut
16-Uykunuzdan ne kadar hoşnutsunuz?	1	2	3	4	5
17-Günlük uğraşılarınızı yürütebilme becerinizden ne kadar hoşnutsunuz?	1	2	3	4	5
18-İş görme kapasitenizden ne kadar hoşnutsunuz?	1	2	3	4	5
19-Kendinizden ne kadar hoşnutsunuz?	1	2	3	4	5
20-Aileniz dışındaki kişilerle ilişkilerinizden ne kadar hoşnutsunuz?	1	2	3	4	5
21-Cinsel yaşamınızdan ne kadar hoşnutsunuz?	1	2	3	4	5
22-Arkadaşlarınızın desteğinden ne kadar hoşnutsunuz?	1	2	3	4	5
23-Yaşadığınız evin koşullarından ne kadar hoşnutsunuz?	1	2	3	4	5
	Hiç hoşnut değil	Çok az hoşnut	Ne hoşnut, ne değil	Epeyce hoşnut	Çok hoşnut
24-Sağlık hizmetlerine ulaşma koşullarınızdan ne kadar hoşnutsunuz?	1	2	3	4	5
25-Ulaşım	1	2	3	4	5

olanaklarınızdan ne kadar hoşnutsunuz?					

Aşağıdaki soru son dört hafta içinde bazı şeyleri ne sıklıkla hissettiğiniz ya da yaşadığınıza ilişkindir.

	Hiçbir zaman	Nadiren	Ara sıra	Çoğunl ukla	Her zaman
26-Ne sıklıkla hüzün, ümitsizlik, bunaltı, çökkünlük gibi olumsuz duygulara kapılırsınız?	1	2	3	4	5

	Hiç	Çok az	Orta derecede	Çokça	Aşırı derecede
27-Yaşamınızda size yakın kişilerle (eş, iş arkadaşı, akraba) ilişkilerinizde baskı ve kontrolle ilgili zorluklarınız ne ölçüdedir?	1	2	3	4	5

APPENDIX J

ÖĞRENME BOZUKLUĞU BELİRTİ TARAMA TESTİ

Öğrenme Bozukluğu olan çocuklar, zihinsel gelişimleri açısından yaşıtlarıyla aynı düzeyde olmalarına karşın okuma yazma ya da aritmetik gibi alanlardan bir ya da bir kaçında bazı güçlükler yaşamakta, bunların yanı sıra okulda, evde, günlük yaşamla ilgili bazı işlevlerde de bir takım farklılıkları, sorunları olabilmektedirAşağıda bu özelliklerin bir listesi bulunmaktadır. Bu özelliklerden her birini öğrencinizde ne ölçüde gözlediğinizi belirtiniz.

Teşekkür Ederiz.

	AKADEMİK BAŞARI	Hiçbir Zaman	Bazen	Sıklıkla	Her zaman
1	Bir çok alanda zeki görünmesine karşın okul başarısı düşüktür.				
2	Başarı durumu günden güne hatta saatten saate değişiklik gösterir.				
3	Bazı ders/alanlarda başarısı normal hatta normalin üstünde iken,bazı ders/alanlarda düşüktür.				
	OKUMA BECERİSİ	Hiçbir Zaman	Bazen	Sıklıkla	Her zaman
4	Okuması yaşıtları düzeyinde değildir.				
5	Okumayı sevmez.				
6	Yaşıtlarından daha yavaş okur.				
7	Bazı harflerin seslerini öğrenemez (harfin şekli ile sesini birleştiremez).				
8	Sessiz ya da sesli okurken kelimeleri parmağıyla izler.				
9	Sınıf düzeyinde bir parça okurken satır, kelime ya da harf atlar yada tekrar okur.				
10	Okurken anlamı bozacak kelimeleri parçadakilerin yerine koyar (ne zaman yerine, nerede gibi).				
11	Kelimeleri hecelerken ya da harflerine ayırırken zorlanır.				
12	Sınıf düzeyinde bir parçayı okuduğunda anlamakta zorlanır (eğer başka birisi okursa daha iyi anlar).				
13	Okurken bazı harf ya da sayıları karıştırır, ters okur (b-d,b-p,6-9 vb.).				
	GÖRSEL ALGI	Hiçbir Zaman	Bazen	Sıklıkla	Her zaman
14	Gördüğü şeyleri aklında tutmakta zorlanır (görsel belleği zayıftır).				
15	Nesnelerin boyutlarını, şekillerini, uzaklıklarını kavrayamaz (uzaklık, derinlik, boyut algısı zayıftır).				
16	Eşyaları, resimleri, şekilleri eşleştirmekte güçlük çeker, belirli bir şeklin benzerini bulmakta zorlanır.				
	İŞİTSEL ALGI				
17	Bazı harf, sayı ve kelimeleri yanlış duyar, karıştırır (m-n,f-v,b-m,kaş-koş, soba-sopa, bavul-davul gibi).				

18	Sözle verilen yönergeleri anlamakta güçlük çeker (ne söylediğini anlamaz).				
19	Söyleneni dinliyormuş gibi görünür (başkaları söyleneni yapmaya başladığı halde o yönergelerin tekrarlanmasını ister).				
20	Birkaç şey birden söylendiğinde en az birini unutur (işitsel belleği zayıftır).				
21	Aynı zamanda işittiği 2-3 sesten birini duymaz (müzik dinlerken telefon sesini, kendisine seslenildiğini duymaz).				
	YAZMA BECERİSİ	Hiçbir Zaman	Bazen	Sıklıkla	Her zaman
22	Yaşıtlarına oranla el yazısı okunaksızdır.				
23	Yazı yazmayı sevmez.				
24	Akranlarına oranla yazı yazması yavaştır.				
25	Yazarken bazı harf ve sayıları ters yazar, karıştırır (b-p,m-n,ı-i,2-5,d-t,g-ğ,g-y,gibi).				
26	Yazarken bazı harfleri atlar ya da harf ekler.				
27	Sınıf düzeyine göre yazılı imla ve noktalama hataları yapar (küçük harf-büyük harf, noktalama hataları).				
28	Yazarken sayfayı düzenli kullanamaz (gereksiz satır atlar, boşluk bırakır, sayfanın belirli bir kısmını kullanamaz).				
29	Yaşıtlarına oranla çizgileri kötü, dalgalıdır.				
30	Yaşıtlarına oranla insan resmi çizimleri kötüdür.				
	ARİTMETİK BECERİLERİ	Hiçbir Zaman	Bazen	Sıklıkla	Her zaman
31	Aritmetikte zorlanır (dört işlemi yaparken yavaştır, parmak sayar, yanlış yapar).				
32	Sınıf düzeyine göre çarpım tablosu öğrenmede yaşıtları seviyesinin altındadır.				
33	Bazı aritmetik sembolleri öğrenmekte zorlanır, karıştırır (+, -, x vb.).				
	ÇALIŞMA ALIŞKANLIĞI	Hiçbir Zaman	Bazen	Sıklıkla	Her zaman
34	Ev ödevlerini almaz, eksik kalır.				
35	Ev ödevlerini yaparken yavaş ve verimsizdir.				
36	Ders çalışırken sık sık ara verir, çabuk sıkılır.				
37	Ders çalışmayı sevmez.				
38	Ödevlerini yalnız başına yapamaz.				
	ORGANİZE OLMA BECERİLERİ	Hiçbir Zaman	Bazen	Sıklıkla	Her zaman
39	Çantası ve eşyaları dağınıktır.				
40	Defter, kitaplarını kötü kullanır,				

	yırtar.				
41	Defter, kalem ve diğer araçlarını kaybeder.				
42	Zamanını ayarlamakta zorluk çeker (bir işi yaparken ne kadar zaman geçirdiğini tahmin edemez).				
43	Üzerine aldığı işleri düzenlemekte zorluk çeker, nereden başlayacağını bilemez.				
	YÖNELİM BECERİLERİ	Hiçbir Zaman	Bazen	Sıklıkla	Her zaman
44	Sağ-sol karıştırır.				
		Hiçbir Zaman	Bazen	Sıklıkla	Her zaman
45	Yönünü bulmakta zorlanır (doğu-batı, kuzey-güney, kavramlarını karıştırır).				
46	Burada, şurada, orada gibi işaret sözcüklerini karıştırır.				
47	Alt-üst, ön-arka gibi kavramları karıştırır.				
48	Zaman kavramlarını karıştırır (dün-bugün, önce-sonra gibi).				
49	Yıl, ay, gün, mevsim kavramlarını karıştırır (hangi mevsimdeyiz denilince ocak diye cevap verir).				
50	Saati öğrenmekte zorlanır.				
	DOKUNSAL ALGI	Hiçbir Zaman	Bazen	Sıklıkla	Her zaman
51	Gözü kapalı iken avucuna çizilen sayı, harfi anlayamaz.				
52	Gözü kapalı iken hangi parmağına dokunulduğunu anlayamaz.				
	SIRAYA KOYMA BECERİSİ	Hiçbir Zaman	Bazen	Sıklıkla	Her zaman
53	Dinlediği, okuduğu bir öyküyü anlatması istendiğinde öykünün başını sonunu karıştırır.				
54	Haftanın günlerini ya da ayları sırayla sayabilir ama karışık sorulduğunda bir sonrakini bilemez.				
55	Okulda öğrendiklerini ya da çalıştıklarını çabuk unutur.				
	SÖZEL İFADE BECERİSİ	Hiçbir Zaman	Bazen	Sıklıkla	Her zaman
56	Duygu ve düşüncelerini sözel olarak ifade etmekte zorlanır.				
57	Konuşurken düzgün cümleler kuramaz.				
58	Kalabalık içinde konuşurken heyecanlanır, takılır, şaşırır.				
59	Bazı harflerin seslerini doğru olarak telaffuz edemez (r,ş,j gibi harfleri söyleyemez, yanlış söyler).				
60	Konuşması onu tanıyanlar tarafından zor anlaşılır.				
	MOTOR BECERİLERİ	Hiçbir Zaman	Bazen	Sıklıkla	Her zaman
61	Top yakalama, ip atlama gibi işlerde yaşıtları seviyesinin altındadır.				
62	Sakardır, düşer, yaralanır, istemeden bir şeyler kırar.				
63	Çatal, kaşık kullanmakta zorlanır.				
64	Ayakkabı, bağlamayı beceremez.				

65	El becerilerine dayalı işlerde zorluk çeker (düğme ilikleme, makas kullanma, boncuk dizme gibi).				
	SOSYAL-DUYGUSAL DAVRANIŞLAR	Hiçbir Zaman	Bazen	Sıklıkla	Her zaman
66	Düşünmeden aniden aklına eseni yapar.				
67	İstedikleri yapılmadığında aşırı tepki gösterir, öfkelenir.				
68	Eleştirildiğinde aşırı tepki gösterir, öfkelenir ya da dikkate almaz (eleştiriye toleransı azdır).				
		Hiçbir Zaman	Bazen	Sıklıkla	Her zaman
69	Yalnız olmayı tercih eder.				
70	Arkadaş ilişkileri iyi değildir.				
71	Yaşıtları yerine daha çok yetişkinlerle ya da kendinden küçüklerle vakit geçirmekten keyif alır.				
72	Sınıf içinde hayal kurar, dalgındır, sınıfta uyur.				
73	Yaşıtlarına oranla sınıf ya da okul kurallarına uymakta zorluk çeker.				
74	Değişikliklere zor uyum sağlar.				
75	Duygu durumu çok sık değişir (neşeli iken aniden öfkelenebilir).				
76	Kendisine güveni azdır.				
77	Gergin ya da huzursuzdur(dudaklarını ısırır, sık tuvalete gider, saçıyla oynar vb.).				
78	Kendisini fiziksel olarak beğenmez.				
	HAREKETLİLİK	Hiçbir Zaman	Bazen	Sıklıkla	Her zaman
79	Hızlı konuşur.				
80	Aşırı hareketlidir (eli ayağı oynar, kıpırdanır, mırıldanır).				
81	Uzun süre yerinde duramaz.				
	DİKKAT BECERİLERİ	Hiçbir Zaman	Bazen	Sıklıkla	Her zaman
82	Dikkat gerektiren işlerden kaçınır.				
83	Dikkatini ayrıntılara veremez, dikkatsizce hatalar yapar.				
84	Dikkati kolayca dağılır (başkasının sesinden, hareketinden dahi dikkati dağılır).				
85	İşlerini bitirmede yavaştır, oyalanır, nadiren başladığı işi bitirir.				
	MOTİVASYON	Hiçbir Zaman	Bazen	Sıklıkla	Her zaman
86	Başarılı olamadığı zaman çok çabuk vazgeçer.				
87	Okulla ilgili ya da başka faaliyetlere katılmak istemez				
88	Ders ve okulla ilgili faaliyetlerde az çaba gösterir.				

REFERENCES

Ackerman, P. T., Anhalt, J. M., & Dykman, R. A. (1986). Arithmetic automatization failure in children with attention and reading disorders: associations and sequela. *Journal of Learning Disabilities, 19*, 222-232.

Addington-Hall J., & Kalra L. (2001). *Who should measure QoL?* BMJ, 322:1417– 20.

American Psychiatric Association, APA (2000). *Diagnostic and statistical manual of mental disorders, 4th edition, text revision*. Washington, DC: American Psychiatric Press, Inc.

American Psychiatric Association, APA (1994). *Diagnostic and statistical manual of mental disorders. Fourth edition (DSM-IV).* Washington, DC: American Psychiatric Association.

Andrews, F. M., & Withey, S. B. (1976). *Social Indicators of Well-Being.* New York: Plenum Press.

Badian, N. A. (1999). Reading disability defined as a discrepancy between listening and reading comprehension: a longitudinal study of stability, gender differences, and prevalence. *Journal of Learning Disabilities, 32*, 138-148.

Bagwell, C., Molina, B., Pelham, W., & Hoza, B. (2001). Attention deficit hyperactivity disorder and problems in peer relations: Predictions from childhood to adolescence. *Journal of Academy of Child and Adolescent Psychiatry, 40*, 1285-1292.

Batum, P. (2007). *Öğrenme bozukluklarında ebeveyn kabulü/reddi ile içselleştirme ve dışsallaştırma sorunlarının incelenmesi*. (Master's thesis). Hacettepe University, Ankara.

Billingham, L. J., Abrams, K. R., & Jones, D. R. (1999). Methods of analysis of quality of life and survival data in health technology assessment. *Health Technology Assessment*, 3, 55-63.

Bullinger, M., Mackensen, S., & Kircherberger, I. (1994). KINDL-ein Fragebogen zur gesundheitsbezogenen Lebensqualitat von Kindern. *Zeitschrift für Gesundheitpsychologie* 2, 64-67.

Broca, P. (1861). Nouvelle observation d'aphemia produite par une lesion de la moitie pesterieure des deuxieme et troisieme circonvolutions frontales (The novel observation of aphasiz produced by a lesion in the second and third posterior frontal convulution). *Bulletin de la Societe Anatomie,* 6, 398-407.

Bumin, G., Günal, A., & Tükel, Ş. (2008). Anxiety, depression and quality of life in mothers of disabled children. *S.D.Ü. Tıp Fakültesi Dergisi,* 15(1), 6-11.

Burns, R.B.(1979). *The self-concept in theory, measurement, development and behavior*. London: Longman.

Cantrill, H. (1965). *The Pattern of Human Concerns.*Rutgers University Press, News Brunswick.

Chang, M., & McConkey, R. (2008). The perception and experiences of Taiwanese parents who have children with an intellectual disability. *International Journal of Disability, Development and Education, 55,* 27-41.

Chang, M., & Hsu, L. (2007). The perceptions of Taiwanese families who have children with learning disability. *Journal of Clinical Nursing, 16,* 2349-2356.

Collins, D. W., & Rourke, B. P. (2003). Learning-disabled brains: a review of the literature. *Journal of Clinical and Experimental Neuropsychology, 25,* 1011-1034.

Davis, T.E., Nida, R.E., Zlomke K.R., & Nebel-Schwalm, M.S. (2008). Health-related quality of life in college undergraduates with LD: the mediational roles of anxiety and sadness. *Journal of Psychopathological Behaviol Assessment*, 31, 228-234.

DeFries, J. C. (1989). Gender ratios in children with reading disability and their affected relatives: a commentary. *Journal of Learning Disabilities, 22(9),* 544-545.

Dennis, R., Williams, W., Giangreco, M., & Cloninger, C., (1993). Quality of life as a context for planning and evaluation of services for people with disabilities. *Exceptional Children, 59,* 499-512.

Dew, T. L., & Huebner E. S. (1994). Adolescent's perceived quality of life: An exploratory investigation. *Journal of School Psychology, 32,* 185-199.

Diener, E. (1994). Assessing subjective well-being: Progress and opportunities. *Social Indicators Research,* 31, 103-157.

Dockrell, J., & McShane, J. (1993). *Children's learning difficulties: a cognitive approach.* Oxford: Blackwell Publishers, Inc.

Duis, S. S., Summers, M., & Summers, C. R. (1997). Parent versus child stress in diverse family types: An ecological approach. *Topics in Early Childhood Special Education, 17,* 53-73.

Dyson, L. L. (1996). The experiences of families of children with learning disabilities: parental stress, family functioning, and sibling self-concept. *Journal of Learning Disabilities, 29,* 280-286.

Ellis, J.B., & Hirsch, J.K. (2000). Reasons for living in parents of developmentally delayed children. *Developmental Disability,* 21, 323-7.

Erman, Ö. (1997). *Öğrenme bozukluğu ve dikkat eksikliği, aşırı hareketlilik bozukluğu olgularının nörofizyolojik ve nöropsikolojik yöntemlerle incelenmesi.* (Unpublished master's thesis). Ankara University

Eser, E., Yüksel, H., Baydur, H., Erhart, M., Saatlı, G., Özyurt, B.C., Özcan, C., & Sieberer, U.R. (2008). The psychometric properties of the new Turkish generic health-related quality of life questionnaire for children (Kid-KINDL). *Türk Psikiyatri Dergisi,*19, 409-417.

Evans, R. W., Manninen, D. L., & Garrison, L. P. (1985). The quality of life of patients with and stage renal disease. *New England Medical*. 312, 553-558.

Faerstein, L. M. (1981). Stress and coping in families of learning disabled children: A literature review. *Journal of Learning Disabilities, 14,* 420-423.

Ferguson, P. M. (2002). A place in the family: An historical interpretation of research onparental reactions to having a child with a disability. *The Journal of Special Education, 36,* 124-130.

Fidaner, H., Elbi, H., Fidaner, C., Eser, Y.S., Eser, E., & Göker, E. (1999). Yaşam kalitesinin ölçülmesi. *Psikiyatri, Psikoloji, Psikofarmakoloji Dergisi,* 7, Ek Sayı:2.

Fitzpatrick, A., & Dowling, M. (2007). Supporting parents caring for a child with a learning disability. *Art & Science, 22,* 35-39.

Fletcher, J. M., Foorman, B. R., Boudousquie, A. B., Barnes, M. A., Schatschneider, C., & Francis, D. J. (2002). Assessment of reading and learning disabilities: A research-based intervention oriented approach. *Journal of School Psychology, 40,* 27-63.

Gaddes, W. H. (1985). *Learning disabilities and brain dysfunction: A neuropsychological approach.* New York: Springer-Verlag.

Giangreco, M. F. & Cloninger, C. J., Mueller, P. H., Yuan, S., & Ashworth, S. (1991). Perspectives of parents whose children have dual sensory impairments. *Journal of the Association for Severe Handicaps,* 16, 14-24.

Gilberg, C., & Soderstrom, H. (2003). Learning Disability. *Lancet,* 362, 811-821.

Gilger, J. W., & Kaplan, B. J. (2001). Atypical brain development: a conceptual framework for understanding developmental learning disabilities. *Developmental Neuropsychology, 20(2),* 465-481.

Gilman, R., & Huebner, E.S. (1997). Children's reports of their life satisfaction: Convergence across raters, time, and response formats. *School Psychology International, 18,* 138-147.

Glidden, L.M., & Schoolcraft, S, A. (2003). Depression: its trajectory and correlates in mothers rearing children with intellectual disability. *Intellectual Disability Research.* 47, 250-63.

Greenham, S. L. (1999). Learning disabilities and psychosocial adjustment: A critical review. *Child Neuropsychology, 5,* 171-196.

Grigorenko, E. L. (2001). Developmental dyslexia: an update on genes, brains, andenvironments. *Journal of Child Psychology and Psychiatry, 42,* 91-125.

Goldstein, S., & Mather, N. (2001). *Learning disabilities and challenging behaviors: A guide to intervention and classroom managament.* Illinois: Versa Press, Inc.

Goode, D. (1990). *Quality of life for persons with disabilities*. Cambridge: Brookline Books.

Hallahan, D. P., Lloyd, J. W., Kuuffman, J. M., Weiss, M. P., & Martines, E, A. (2005). *Learning disabilities, foundation, characteristics, and effective teaching*. Boston, MA: Allyn and Bacon.

Hammill, D. D., Leigh, E. McNutt, G., & Larsen, S. (1981). A new definition of learning disabilities, *Learning Disability Quarterly, 4,* 332-346.

Hays, R.D., Hayashi, T., Carson, S., & Ware, J. E. (1998). *User's Guide for the Multitrait Analysis Program (MAP).* Santa Monica, CA: The Rand Corporation, N-2786-RC.

Helenius, P., Salmelin, R., Service, E., & Connolly, J. (1999). Semantic cortical activation in dyslexic readers. *Journal of Cognitive Neuroscience, 11,* 535-550.

Halpern, A. (1993). Quality of life as a conceptual framework for evaluating transition outcomes. *Exceptional Children, 59,* 486-498.

Herschbach, P., & Henrich, G. (2000). *Fragan zur Lebenszufriedenheit (FLZM)*. In: U. Ravens-Sieberer, & A. Cieza (Hrsg.). *Lebensqualitat und Gesundheitsökonomie in der Medizin-Konzepte, Methoden, Anwendung*. München: Ecomed-Verlag.

Huntington, D. D., & Bender, W. N. (1993). Adolescents with learning disabilities at risk: Emotional well-being, depression, suicide. *Journal of learning Disabilities*, 26, 159-166.

Joshi, R.M. (2003). Misconceptions about the assessment and diagnosis of reading disability. *Reading Psychology, 24*, 247-266.

Interagency Commitee on LD. (1987). *LD: A report to Congress.* Bethesda, MD: National Institutes of Health.

İstanbul İl Milli Eğitim Müdürlüğü (2009). *İstanbul il özet raporu:2008-2009 öğretim yılı,* İstanbul.

Karabilgin, Ö. S. (2001). *Balatçık sağlık ocağı bölgesinde 15-49 yaş arası kadınlarda depresyon prevalansı ve WHOQOL-BREF ölçeği ile yaşam kalitesinin değerlendirilmesi.* (Doctoral dissertation, Ege Üniversitesi Sağlık Bilimleri Enstitüsü). Retrieved from http:// yok.gov.tr

Karande, S., & Kulkarni, M. (2005). Specific learning disability: the invisible handicap. *Indian Pediatrics*; 42, 315-9.

Karande, S., Kirankumar, B., Madhuri, K., & Arpita, T. (2008). Health-related quality of life of children with newly diagnosed specific learning disability. *Journal of Tropical Pediatrics*, 55, 160-169.

Kavale, K. A., & Forness, S. R. (2000). What definitions of learning disability say and don't say : A critical analysis. *Journal of Learning Disability, 33*, 239-250.

Kavale, K. A., & Forness, S. R. (1995). *The nature of learning disabilities: critical elements of diagnosis and classification.* New Jersey: Lawrence Erlbaum Associates.

Kazak, A. E., & Marvin, R. S. (1984). Differences, difficulties and adaption: Stress and social network in families with a handicapped child. *Family Relations, 33,* 67-77.

Kenny, K., & McGilloway, S. (2007). Caring for children with learning disabilities: An exploratory study of parental strain and coping. *British Journal of Learning Disabilities, 35,* 221-228.

Kerlinger, F. N. (1973). *Foundations of behavioral research.* New York: Holt, Rinehart and Winston.

Kirk, S. A., & Bateman, B. (1962/1963). Diagnosis and remediation of learning disabilities. *Exceptional Children*, 29, 73-78.

Klassen, R. M., Neufeld, P., & Munro, F. (2005). When IQ is irrelevant to the definition of learning disabilities. *School Psychology International, 26 (3),* 297-316.

Korkmazlar, Ü. (1999). Özel öğrenme bozukluğu (öğrenme güçlükleri). Editör: A. Ekşi, *Ben hasta değilim, çocuk sağlığı hastalıklarının psikososyal yönü*. Nobel Tıp Kitabevleri: İstanbul.

Korkmazlar, Ü. (1993). *Özel öğrenme bozukluğu (6-11 yaş ilkokul çocuklarında özel öğrenme bozukluğu ve tanı yöntemleri)*. Taç Ofset: İstanbul.

Korkmazlar, Ü. (1992). *6-11 yaş ilkokul çocuklarında özel öğrenme bozukluğu ve tanı yöntemleri.* (Unpublished master's thesis). İstanbul University.

Kuhne, M. & Wiener, J. (2000). Stability of social status of children with and without learning disabilities. *Learning Disability Quarterly*, 23, 64-75.

Kussmaul, A. (1877). Disturbances of speech. In H. Von Ziemssen (Ed.) &J. A.McCreery (Trans.), *Cyclopedia of the practice of medicine* (p. 595). New York: William Wood.

Lee, P., Lee, T., Chen, V., Shih, D., Shao, W., & Lee, M. (2010). Quality of life in mothers of children with oppositional defiant symptoms: a community sample. *Mental Health in Family Medicine*, 7:93-100.

Lerner, J. W. (1985). *Learning disabilities: theories, diagnosis, and teaching strategies* (4th Ed.). Boston: Houghton Mifflin Company.

Lewis, C., Hitch, G. J., & Walker, P. (1994). The prevalence of specific arithmetic difficulties and specific reading difficulties: in 9- to 10-year-old boys and girls. *Journal of Child Psychology and Psychiatry, 35(2),* 283-292.

Margai, F., & Henry, N. (2003). A community-based assessment of learning disabilities using environmental and contextual risk factors. *Social Science & Medicine*, 56(5), 13

Margalit, M., & Heiman, T. (1988). Social competence of learning disabled children: Cognitive and emotional aspects. *Exceptional Child, 3*, 179-189.

Mather, N., & Healey, W.C. (1990). Deposing aptitude-achievement discrepancy as the imperial criterion for learning disabilities. *Learning Disabilities: A Multidisciplinary Journal*, 1, 40-48.

Mendaglio, S. (1993). Counseling gifted learning disabled individuals and group counseling techniques. In L. K. Silverman (Ed.), Counseling the gifted and talented (pp. 131-149). Denver, CO: Love.

Mendlowicz, M. V., & Stein, M. B. (2000). Quality of life in individuals with anxiety disorders. *American Journal of Psychiatry,* 157(5), 669-682.

Mellard, D.F., Deshler, D.D., & Barth, A. (2004). LD identification: It's not simply a matter of building a better mousetrap. *Learning Disability Quarterly, 27 (4),* 229-242.

Milli Eğitim Bakanlığı Talim ve Terbiye Kurulu Başkanlığı (2008). *Özel öğrenme güçlüğü destek eğitim programı.* Ankara, MEB Yayınları.

National Dissemination Center for Children with Disabilities (NICHY). (2004). Retrieved, May 11, 2011.

National Joint Committee on LD (1988). *Letter to NJCLD Member Organizations*. Washington, DC: Author.

National Center for Learning Disabilities & the Office of Special Education Programs (2002). *Specific learning disabilities: Finding common ground.* New York: Author.

NCLD Public Policy Staff (2009). IDEA 2004 final regulations update. *National* 91 *Center for Learning Disabilities*. Retrieved from http://www.ncld.org/on-capitol-hill/federal-laws-aamp-ld/idea/idea/

Pearl, R., & Bay, M. (1999). *Psychosocial correlates of learning disabilities. Handbook of psychosocial characteristics of exceptional children*. New York: Plenum Publishers.

Peraino, J. M. (1992). *Post 21 follow-up studies: How do special education graduates fare?* Paul H. Brookes: Baltimore, MD.

Pliszka, S. R., Carlson, C. L., & Swanson, J. M. (1999). *ADHD with comorbid disorders*. New York: Guilford Press.

Power, S. M. (2000). Psychological adjustment of children with learning disabilities: Do friends make the difference? *Dissertation Abstracts International, 60*, 4903.

Pugh, K. R., Mencl, W. E., Jenner, A. R., Ren Lee, J., Katz, L., Frost, S. J., Shaywitz, S.E., & Shaywitz, B. A. (2001). Neuroimaging studies of reading development and reading disability. *Learning Disabilities Research and Practice, 16(4),* 240-249.

Raphael, D. (1996). Defining quality of life: Eleven debates concerning its measurement. Sage: Thousand Oaks, CA.

Raskind, W. H. (2001). Current understanding of the genetic basis of reading and spelling disability. *Learning Disability Quarterly, 24*, 141-157.

Rauch, A., Hoyer J., & Guth S. (2000). Diagnostic yield of various genetic approaches in patients with unexplained developmental delay or mental retardation. *Medical Genetics,140*, 63–74.

Reiter, S., & Bendov, D. (1996). The self-concept and the quality of life of two groups of learning disabled adults living at home and in group homes. *The British Journal of Developmental Disabilities, 27*, 97-111.

Reschley, D. J., & Tilly, W. D. (1999). *Special education in transition: Functional assessment and noncategorical programming*. Longmont, CO:Sopris West.

Roy, A., & Roy, M. (2000). *Causes and prevention of learning disabilities.* Learning Disability Book Online. Retriewed from http://onlinelibrary.wiley.com/doi/10.1111/j.1460-9592.2007.02323.x/pdf

Sajid, M. S., Tonsi, A., & Baig, M. K. (2007). Perceived quality of life measurement. *International Journal of Health Care Quality Assurance,* 21, 365-373.

Sart, H.Z. (1999). *Mathematical disability in children with idiopathic partial epilepsies.* (Masters thesis). Bogazici University, Istanbul.

Schalock, R. L. (1990). *Quality of life: Perspectives and Issues*. Washington, DC:American Association of Mental retardastion.

Schonfeld, W., Veboncoeur, C., Fifer, S., Lipschut, R., Lubeck, D., & Buesching, D. (1997). The function and well-being of patients with unrecognized anxiety disorders and major depressive disorders. *Journal of Affective Dissorders, 43*, 105-119.

Seeman, J. (1989). Toward a model of positive health. *American Psychologist, 44,* 1099-1109.

Shalev, R. S. (2004). Developmental dyscalculia. *Journal of Child Neurology,19,* 765-771.

Shawaryn, M. A., Schiaffino K. M., & Johnston, M. V. (2002). Determinants of perceived quality of life in multiple sclerosis: the role of illness intrusiveness. *Multiple Scleroz,* 8, 310-8.

Shin, L. M. (1998). *Learning disabilities sourcebook*. Detroit: Omnigraphics, Inc.

Sieberer, U., & Bullinger, M.(2000). *Questionnaire for measuring health-related quality of life in children and adolescents,* retrieved from www.kindl.org.

Silver, L. B. (1989). Learning disabilities. *Journal of American Academy Children and Adolescents.* 28, 309-313.

Skevington, S. M., Lotfy, M., & O'Connell, K. A. (2004). The World Health Organization's WHOQOL-BREF quality of life assessment: Psychometric properties and results of the international field trial: A report from the WHOQOL Group. *Quality of Life Research, 13,* 299–310.

Smith, T.B., Innocenti, M.S., Boyce, G.C., & Smith, C.S.(1993). Depressive symptomatology and interaction behaviors of mothers having a child with disabilities. *Psyhological Research. 73,* 1184-6.

Spekman, N. J., Goldberg, R. J., & Herman, K. L. (1992). Learning disabled children grow up: A search for factors related to success in the young adult years. *Learning Disabilities research and Practice, 7,* 161-170.

Stanovich, K.E. (1999). The sociopsychometrics of learning disabilities. *Journal of Learning Disabilities, 32,* 350-361.Stanovich, K.E. (2005). The future of a mistake: Will discrepancy measurement continue to make the learning disabilities field a pseudoscience? *Learning Disability Quarterly, 28,* 103-106.

Sternberg, R.J., & Grigorenko, E.L. (2002). Different scores in the identification of children with learning disabilities: its time to use a different method. *Journal of School Psychology, 40,* 1, 65-83.

Obrzut, J. E., Boliek, C. A., Bryden, M. P., & Nicholson, J. A. (1994). Age and sex related differences in left and right hemisphere processing by learning disabled children. *Neuropsychology, 8,* 75-82.

The WHOQOL Group (1998). Development of The World Health Organization WHOQOL-BREF quality of life assessment. *Psychological Medicine, 28,* 551-558.

Toposki,T., Edwards, T.C., Patrick, D.L., Varley, P., Way, M.E., & Buesching, D. (2004). *Quality of life of adolescent males with attention-deficit/hyperactivity disorder*. Journal of Attention Disorders, 7(3), 163-173.

Torgesen, J.K. (2001). Learning disabilities as a working memory deficit the important next questions. *Issues in Education, 7 (1),* 93-103.

Torgesen, J., K., & Wong, B., L. (1986). *Psychological and educational perspectives on learning disabilities*. London: Academic Press.Inc.

Valas, H. (1999). Students with learning disabilities and low achieving students. Peer acceptance, loneliness, self-esteem and depression. *Social Psychology of Education, 3*, 173-192.

Vogel, S. A. (1990). Gender differences in intelligence, language, visual-motor abilities, and academic achievement in students with LD: A review of the literature. *Journal of Learning Disabilities, 23(1),* 44-52.

Weigl, V., Rudolph, M., Eysholdt, U., & Rosanowski, F.(2005). Anxiety, depression and quality of life in mothers of children with cleft. *Folia Phoniatr Logop* 57, 20-7.

Wells, K. B., Stewart, A., Hays, R. D., Burnam, M.A., Rogers, W., & Daniels, M. (1989). The functioning and well-being of depressed patients. Results from the medical outcomes study. *Journal of the American Medical Association, 262(7)*, 914-919.

Wicks- Nelson, R.W., & Israel, A.C. (2003). *Behavior disorders of childhood* (5th Ed). New Jersey: Prentice Hall.

Wilgosh, L. (1990). Issues in education and daily living for families of children with disabilities. *The Alberta Journal of Educational Research, 36,* 299-309.

World Health Organization (2006). *International classification of disorders-10*. Retrieved from http://apps.who.int/classifications/apps/icd/icd10online/?gf80.htm+f819

Wunderlich, R., A., & Lorr, M. (1986). Two objective measures of self-esteem. *Journal of Personality Assessment,* 50:18-23.

Yilmaz, O., Yildirim, S.A., Oksuz, C., Atay, S., & Turan, E. (2010). Mothers' depression and perceived quality of life in neuromuscular diseases: Role of functional independence level of the children. *Pediatrics International, 52,* 648-652.