

PSYCHOLOGICAL ADJUSTMENT OF CHILDREN WITH SPASTIC  
CEREBRAL PALSY

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## **ABSTRACT**

### **PSYCHOLOGICAL ADJUSTMENT OF CHILDREN WITH SPASTIC CEREBRAL PALSY**

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The aim of the present study was to examine the predictive values of socio-demographic variables, parental variables (parental stress, family functioning, parental adjustment, coping methods), and child variables (coping methods, self concept) for the adjustment of children with spastic cerebral palsy. Transactional stress and coping model was used as the conceptual framework for the study. The sample of the study was composed of 80 children with spastic cerebral palsy and one of their parents. Hierarchical regression analysis was conducted to test the child adjustment by using child gender, parent education, parental stress, family functioning, parental adjustment, parental coping methods, child coping methods, and child self concept as independent variables. Results revealed that parental

stress, parents' problem solving/optimistic coping and fatalistic coping predicted the adjustment of children with spastic CP. However, parental adjustment, family functioning, child coping and child self concept were not significantly predicting of child adjustment. The findings, strengths, limitations as well as the implications of the findings were discussed.

Keywords: Spastic cerebral palsy, adjustment, stress, coping, family functioning, self concept

# ÖZ

## SPASTİK SEREBRAL PALSİ HASTASI OLAN ÇOCUKLARIN PSİKOLOJİK UYUM SÜREÇLERİ

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Bu çalışmanın amacı serebral palsi hastası olan çocukların bu hastalığa uyum süreçlerini araştırmaktır. Etkileşimsel Stres ve Başa Çıkma Modeli (Thompson & Gustafson, 1996) çalışmanın kavramsal çerçevesini oluşturmaktadır. Çalışmanın örneklem grubunu 80 spastik serebral palsili çocuk ve onların ebeveynlerinden biri oluşturmaktadır. Ailenin stres, uyum ve işlevselliği, ailenin ve çocuğun başa çıkma yöntemleri, çocuğun öz güveni bağımsız değişkenler olarak, çocuğun uyumu ise bağımlı değişken olarak alınarak hiyerarşik regresyon analizi yapılmıştır. Bulgular doğrultusunda, ailesel stres, problem odaklı başa çıkma yöntemleri ve fatalistik başa çıkma yöntemleri çocuğun uyum süreçlerini yordamıştır. Ancak, aile işlevselliği ve ailenin uyum problemlerinin, çocuğun başa çıkma yöntemleri ve öz güveninin çocuğun uyum süreçlerinde önemli bir etkisi

bulunmamıştır. Çalışmanın güçlü ve zayıf yönlerinin yanısıra, çıkarımlar da tartışılmıştır.

Anahtar kelimeler: Spastik serebral palsi, uyum, stres, başa çıkma yöntemleri, aile işlevselliği, öz kavram

To My Parents

Metin & Figen Aytolun

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# CHAPTER I

## INTRODUCTION

With the medical advances in pediatric healthcare, the survival rates for many childhood high-risk illnesses (e.g. preterm birth, severe heart defects) have significantly improved (Majnemer, 2006; Thompson & Gustafson, 1996). Although these children survive, they are still at risk for developmental disabilities such as cerebral palsy, spinal bifida, myopathy, and movement disorders (Koman, Smith, & Shilt, 2004). These chronic illnesses bring about psychological problems in children. Thompson and Gustafson (1996) stated that children with chronic illnesses are at an increased risk for psychological and adjustment problems. Pless (1984) showed that children with chronic illnesses have 1.5 to 3 times higher risk for psychological adjustment problems compared with their healthy peers (cited in Thompson, Gustafson, Gil, Godfrey, & Murphy, 1998). Therefore, research in the field is focused on enhancing the adaptation of children and their families to the stress caused by chronic childhood illness.

### *1.1 Childhood Chronic illness*

Chronic illness is generally defined as a disorder that can be progressive and fatal or associated with a relatively normal life span despite impaired physical

or mental functioning. It can persist longer than 3 months in a given year or required a period of continuous hospitalization of more than 1 month (Thompson & Gustafson, 1996). Childhood chronic illness is different from that of adult chronic illnesses. That is, adults encounter a relatively small number of common chronic conditions; and society and health services are more familiar with them such as diabetes or osteoporosis. However, children encounter a relatively large number of rare conditions; and the communities are not familiar with them (Perrin & Maclean, 1988). Some of the childhood chronic illnesses are cerebral palsy, asthma, cystic fibrosis, diabetes mellitus, sickle cell disease, and malignancy. According to the Child Health Policy Institute (2001), about 15% to 18% of children in the United States have a chronic health condition. The presence of a chronic condition or disability affects both the chronically ill child and all the family members. Often, these children and families are at greater risk for developing mental health problems. Specifically, cerebral palsy is one of the childhood chronic illnesses that cause childhood physical disability. Like children with other chronic illnesses, children with and young people with CP are at higher risk of developing problems related to psychological adjustment when compared to their healthy peers.

## *1.2 Cerebral Palsy*

Cerebral Palsy (CP) is a general term describing several clinical syndromes of the developing brain that affect body movement, posture, and muscle coordination (Herring, 2007). The etiological factors of CP affect the

immature brain by producing neuropathological lesions and these lesions cause abnormalities in the control functions of the brain (Herring, 2007). Thus, although the spinal cord and muscles are structurally and biochemically normal, there is an abnormality in the brain.

The abnormality in the brain occurs prenatally, perinatally, or postnatally (during childhood). In perinatal period, the brain of fetus is sensible to damage from maternal infections like herpes, rubella, or syphilis (Morrissey & Weinstein, 2006). These infections cause significant damage to the developing brain of the fetus and such damage leads to orthopedic deformities (Herring, 2007). Additionally, fetal exposure to drugs and alcohol through maternal use can cause injury to the developing brain and this leads to severe CP (Herring, 2007). In perinatal period anoxia, premature delivery, sepsis, or open heart surgery can predispose one to the development of CP (Herring, 2007). In postnatal period infections such as meningitis or trauma like vehicle accidents producing brain injury may result in CP, as well (Herring, 2007).

### *1.2.1 Prevalence*

CP occurs in 1 to 7 children per 1000 throughout most of the world. It is more common in some geographic regions where prenatal maternal and perinatal infant care is poor. The United Cerebral Palsy Research and Educational Foundation estimated 1.5-2.0 million children and adults having cerebral palsy in the United States. According to a cross sectional study in Turkey, 4.4 per 1000

live births have CP and 26.6% of these CP cases were classified as prenatal, 18.5% perinatal, and 5.9% postnatal (Serdaroglu, Cansu, Özkan, & Tezcan, 2006).

### *1.2.2 Classification*

Cerebral Palsy is classified by the neuropathic type of motor dysfunction and by the anatomic region of involvement.

The neuropathic type classifies cerebral palsy according to their physiological characteristics and describes the type of movement disorder (Herring, 2007). There are four forms of neuropathic type. The first and the most common form of CP is spastic CP (Herring, 2007). It results from damage to the pyramidal system, particularly the motor cortex in the brain. Spasticity is usually accompanied by weakness, loss of muscle control, and interference with balance (Herring, 2007). The second form of CP is athetoid CP and it is characterized by abnormal movements that the patient cannot control. It is caused by extra pyramidal brain lesion. When the child is frightened and excited the movements become more exaggerated. The speech of the child with athetoid CP is often garbled and difficult to understand (Herring, 2007). The most uncommon form of CP is ataxic CP. It is disturbance of coordinated movement. Ataxic CP occurs as a result of cerebellar dysfunction. In the mixed form of CP spasticity, the fourth form of CP, athetosis and ataxia occur together (Herring, 2007).

The second classification system, which is anatomic region involved, describes what part of the body is affected by cerebral palsy (Morrissey & Weinstein, 2006). Based on this classification system, three types of CP were

defined. The first one is hemiplegia. In hemiplegia one side of the body is more affected (Morrissey & Weinstein, 2006). Such as the upper limb is more affected than the lower. In the second type, diplegia, both sides of the body is affected (Morrissey & Weinstein, 2006). The last type is quadriplegia. Quadriplegia implies the involvement of four limbs (Morrissey & Weinstein, 2006). The spectrum of severity is wide, from having no sitting ability or head control to being able to walk independently.

### *1.3 Adaptation*

Cerebral palsy, as a chronic illness, is a potential stressor for the children and their families. Children with cerebral palsy have to live with this illness from birth to death. When they become aware of themselves they see that they are different from other children and after a while they understand that they will never be like others. Their body do not obey their commands, and never move right. This is a frustrating situation for these children. The situation is nearly same for the families of children with CP. Parents give birth to a baby but after a while they realize that their baby cannot sit up rightly or cannot stand, or cannot use her/his hands straightly. Although some orthopedic treatments and operations reduce some acute symptoms, their anatomic structures remain the same. Therefore, the adaptation to the illness is important for both children and their families. Thomson and Gustafson (1996) indicated that illness parameters (severity or type), demographic parameters (age, gender, SES), and cognitive processes are significantly associated with adaptation.

### *1.3.1 Variables of Adaptation*

#### *1.3.1.1 Illness Parameters*

The impact of illness parameters on the psychosocial adjustment of children with chronic illness is a controversial issue. According to the noncategorical approach, adaptation is viewed as a function of dimensions that are common to all chronic physical illnesses. These dimensions are visibility, stability, life-threatening potential, and sensory or motor impairment (Stein & Jessop, 1982). That is, illness specific parameters do not have direct effect on adjustment. However, some specific illnesses differ along a number of dimensions like condition and duration, which are potentially important to adjustment. Similarly, according to the findings of the meta-analysis of Lavigne and Faier-Routman (1993), illness severity, functional status like performing daily tasks, and prognosis such as fatal or stable, are significantly correlated with adjustment. In illness parameters, researchers have addressed the condition type, condition severity, and functional status in terms of their contribution to the adjustment.

Condition type, which is one of the illness parameters, is associated with adjustment. Children with chronic illnesses involving the brain have more behavior problems and they have poor social functioning as compared to children with chronic illnesses that do not involve the brain (e.g. diabetes, heart defects, cancer) (Stein & Jessop, 1982; Thompson et al., 1998). In a study done with cerebral palsied and healthy control children, it was found that intellectual functioning was related with the adjustment of children (Perrin, Ayoub, & Willett, 1993).

Condition severity is another illness parameter. However, studies done with children with asthma (Cortney, Jill, Lary, Melissa, & Christina, 2008) cystic fibrosis (Casier, Gaubert, Huse, Theunis, Franckx, Robberecht, Matthys, & Grombez, 2008; Thompson et al., 1998), spinal bifida, cerebral palsy (Perrin, Ayoub, & Willett, 1993), diabetes (Hocking & Lochman, 2005), and sickle cell disease (Hocking & Lochman, 2005) did not find any relationship between condition severity and psychological adjustment. However, the findings of a study with physically ill children found that severity of the disability is significantly associated with parental and child adjustment (Mazur, 2008).

Duration of the illness is the other parameter that has a relationship with adjustment. In a cross sectional study, it was found that in children with rheumatoid arthritis duration of the disease is negatively related to psychological adjustment (Daniels, Moos, Billings, & Miller, 1987). To be able to understand the relation between duration of the illness and psychosocial adjustment better, in other words, to see how illness parameters affect the adjustment over time, longitudinal studies are needed. And there is no longitudinal study about the relation of the duration of cerebral palsy with psychological adjustment among children.

To sum up, the studies conducted to test the relation between illness parameters and adjustment showed that in various illnesses, condition type, condition severity, and duration of the illnesses are correlated with adjustment.

#### *1.3.1.2 Demographic parameters*

According to a meta-analysis, the set of variables of child characteristics was significantly associated with child's adjustment. These variables are self concept, coping, and IQ (Lavigne & Faier-routman, 1993). Although age and gender were not included to the set, they were significantly associated with child adjustment, too (Thompson & Gustafson, 1996).

Thompson and Gustafson (1996) explained that the contribution of gender to psychosocial adjustment changes according to the dimensions of adjustment (e.g. self esteem) and gender of the patient. When adjustment was assessed through self reports, girls with chronic disorders reported more symptoms of distress than boys (Thompson & Gustafson, 1996). However, a study with children with cerebral palsy showed that boys had more behavior problems than girls (Shields, Loy, Murdoch, Taylor, & Dodd, 2007).

Age is another child characteristic that may influence adjustment to chronic illness. As it is mentioned above there was no longitudinal study relevant to the adjustment of the children to the chronic illnesses. Similarly, in order to investigate the relationship of the age with psychosocial adjustment longitudinal studies are needed.

Temperament is another characteristic that was tested with physically handicapped children. Accordingly, mother-reported child activity level was positively associated with child's internalizing and externalizing behavior problems (Wallander, Hubert, & Varni, 1988).

In conclusion, the studies conducted with children with various chronic illnesses showed that the demographic variables, such as age, gender, and temperament play an important role in predicting their adjustment.

### *1.3.1.3 Cognitive Processes*

Cognitive processes stated in biopsychosocial framework mediate / moderate the relationship between the stress of chronic childhood illness and psychosocial adjustment (Thompson & Gustafson, 1996). Cognitive processes is a variable of both maternal and child adaptational processes. The stress appraisal, perception of control, and self concept are the cognitive processes associated with the adjustment (Lovallo, 1997; Haubert & Holland, 1990; Hampel & Petermann, 2006 ).

#### *1.3.1.3.1 Stress Appraisal*

Selye, in 1956, is the first researcher who used the “stress” term in the scientific area. He defined stress as the nonspecific reactions of the body as a result of the demands upon the person (as cited in Lovallo, 1997 p. 112). Psychological stress has been conceptualized in three ways. The first approach conceptualizes the stress as a stimulus that affects the individual (Sarafino, 1997). The second approach focuses on the people’s reactions to the stressors. Therefore, the second approach sees the stress as a response. The third approach describes the stress as a process. This process includes continuous interactions and adjustments, which are called transactions. These transactions are between the

environment and the person, and they affect each other (Sarafino, 1997). In the light of these approaches it was suggested that stress is the condition that results when person–environment transactions cause the individual to be aware of discrepancy between external and/or internal demands of a situation and the resources of the individual’s biological, psychological, and/or social systems (Lazarus & Folkman, 1991; Sarafino, 1997; Lovallo, 1997). Due to the imbalance between the person and the environment, the individuals experience more or less stress.

Transactions that lead to stress involve in an assessment process, which is called cognitive appraisal (Lazarus & Folkman, 1984). Lazarus and Folkman (1984) defined the cognitive appraisal as a personal interpretation of a situation that the individual encounter; and they distinguished two types of appraisals; primary and secondary appraisal.

Primary appraisal is the process of the evaluating the importance of a transaction with respect to personal well being. Individuals evaluate the environment as irrelevant, benign-positive, or stressful. In irrelevant encounter, the situation has no effect on the well being of the person. In a benign-positive encounter positive results are possible for the individual. Lazarus and Folkman (1984) explained three types of stressful appraisal, which are harm-loss, threat, and challenge. Harm–loss refers to injury that the individual already experienced. Threat is the expectation of potential harm or loss. Challenge refers to the potential to achieve growth, mastery, or gain (Lazarus & Folkman, 1984). Lazarus and Folkman (1984) stated that appraisals of threat and harm-loss are

related with negative emotions, but appraisals of challenge are related with positive emotions.

Secondary appraisal is the process of evaluating the coping resources and the options of the individual to deal with the threat (Lazarus & Folkman, 1984). Coping resources include physical, social, psychological, and material issues (Lazarus & Folkman, 1984). If a person perceives that a situation is under his/her own control, efficient appraisals are made.

As it is mentioned above, the degree of stressfulness of a situation is related to the cognitive processes of appraisals. These appraisals make it possible to understand the children's experience of stress. Children's understanding of stress differs according to their level of cognitive development (Thompson & Gustafson, 1996). In the first years, toddlers are not capable of resolving discrepancies; thus, this leads to distress (Haubert & Holland, 1990). Two to four years old children became aware of themselves and others, so they become vulnerable to distress (Haubert & Holland, 1990). In the middle childhood, children start to use social comparison and they start to evaluate themselves (Haubert & Holland, 1990). Therefore, this evaluation and comparison lead to subjective stress (Thompson & Gustafson, 1996). During late childhood and early adolescence their self concepts are identified with ideals and competencies (Haubert & Holland, 1990) and this makes them vulnerable to stress. Moreover, during the adolescence period researchers tested the changes in their cognitive appraisals of daily stressful events. They showed that cognitive complexity of

stress appraisal increases from early to middle and late adolescence (Compas, Davis, Forsythe, & Wagner, 1987 as cited in Thompson & Gustafson, 1996).

The literature on the association between stress and adjustment showed the relation between perception of stress and behavior problems. For instance, in a study with healthy adolescents it was found that perceived stress is positively associated with emotional and behavioral problems and adjustment (Hampel & Petermann, 2006). A study with maltreated children demonstrated a relationship between children's stress and their adjustment. They found that there is a positive relationship between children's undesirable life events and their psychological problems (Cicchetti & Rogosch, 2009). The higher the stress, the more behavior problems children experienced. In a research done with cystic fibrosis and sickle cell disease children it was found that children's perception of stress is associated with their self reported emotional and behavioral problems (Thompson & Gustafson, 1996). Similarly, studies with spinal bifida (Murch & Cohen, 1989) and asthma (Maclean, Perrin, Gordmaker & Pierre, 1992) suggested that poor adjustment of children was positively related to high levels of perceived stress of negative life events.

Although perceived stress is a significant parameter for child's adjustment, it is important for maternal adjustment, too. The mother's stress is important, because it affects not only the parent's well-being but also the adjustment of the child with chronic illness (Quine & Pahl, 1991). Dewey and Crawford (2007) compared 123 mothers/fathers of children with cystic fibrosis, muscular dystrophy, asthma, and Type 1 diabetes with the mothers/fathers of healthy

children. They found that families with handicapped children experience significantly higher levels of stress than families with healthy children. Similar findings were present in another study conducted by Mereuta and Craciun (2009) with mothers of children with cancer. They showed that the stress levels of mothers of children with cancer is higher than mothers with healthy children, and increment in illness related stress leads to maladaptive behaviors and children's distress. Similarly, a study with mothers of cerebral palsied children emphasized that the mother's stress level was positively associated with children's emotional problems (Glenn, Cunningham, Poole, Reeves, & Weindling, 2008). Although the researchers generally found a positive association between parental stress and child stress, Wanamaker and Glenwick (1998) suggested a different finding in families with cerebral palsy. That is, mother's distress was not a predictor of child adjustment whereas the father's distress was related to high levels of child maladjustment.

To sum up, stress is a significant variable in predicting child's adjustment. As it was revealed in several studies, the stress level of both the child with chronic illness and his/her caregiver's stress is positively associated with their adjustment.

#### *1.3.1.3.2 Self - Concept*

Self concept is one of the fundamental components of the child's psychological functioning. This notion includes child's perceived competence in five specific domains, which are social acceptance (how they communicate with peers), athletic competence (how they view themselves in sports), behavioral

conduct (how they behave), scholastic competence (how they perform in school), and physical appearance (how they look) (Harter, 1985). General sense of self-worth, the way they assess themselves according to whether they like themselves, is an important issue in self concept, too (Harter, 1985). Children's sense of control over their successes and failures do also contribute to their sense of self-worth. Moreover, higher self-worth is mostly associated with taking more responsibility for successes than failures (Harter, 1985).

In literature, this concept has been studied with chronically ill children. However, the literature has indicated controversial findings about the self concept and self worth of children with different kinds of chronic illnesses. In researches done with visible physical disorders like cerebral palsy, spinal bifida, and developmental coordination disorder it was found that these children are significantly lower in self concept (Tam, Chan, Lam, & Lam, 2003; Shields, Murdoch, Loy, Dodd, & Taylor, 2006; Russo, Goodwin, Miller, Haan, Connell, & Crotty, 2008). Similarly, in a meta-analysis about the self esteem and self concept of children and adolescents with physical disabilities, 13 studies, conducted with spinal bifida and cerebral palsy, were examined. According to the analysis, although minor physical disabilities affect the global self worth, physical appearance, and social acceptance moderately, the effect of major physical disabilities on the general self esteem of young people was mild (Miyahara & Piek, 2006). On the contrary, in studies with invisible chronic disorders like epilepsy or asthma, it was found that the self concepts of these children did not

differ from healthy children (Lee, Hamiwka, Sherman, & Wirrell, 2008; Burkhart & Rayens, 2005).

Another controversial issue in the literature is the relation of the self concept and self worth with psychological adjustment. Schuengel et al. (2006) conducted a research with 80 children with CP to examine the relevance of physical disabilities to self-worth and perceived competence. The results revealed that internalizing problems of children were negatively associated with perceived competence and self-worth, whereas aggression was positively associated with perceived motor competence, physical appearance, and self-worth. In another study, which was conducted with 195 disabled and chronically ill adolescents, Dahlbeck and Lightsey (2008) found that higher self-esteem and lower levels of emotional reaction coping predicted both higher psychological adjustment and lower anxiety. They claimed that low self-esteem may affect children's confidence in their ability to handle their disability or illness and may increase social withdrawal and self criticism. That is, the influence of self-esteem on anxiety may be mediated by such situation-specific factors.

#### *1.3.1.3.3 Health Locus of Control*

The term locus of control was first used by Rotter (1966; as cited in Thomson & Gustafson, 1996, p. 204), who introduced two kinds of loci of control as internal and external. According to Rotter (1966), if a person perceives that the event is contingent upon his own behavior or his own relatively permanent

characteristics, the belief is termed as an internal control. However, if the person uses luck, fate, change, controls of powerful others, or the great complexity of the forces surrounding him, the belief is termed as an external control.

In general, the literature suggests that people who use internal locus of control, have better psychological outcomes than who use external locus of control. Generally, if a person knows that the situation is under his/her control, his/her stress level tends to decrease. Strickland (1978) claimed that perception of control can affect the stress appraisal and coping strategies of patients with chronic illness. Both internal locus of control and situational appraisal of control are related with the use of problem focused coping methods (cited in Thompson & Gustafson, 1996). Folkman and Lazarus (1984) stated that the efficiency of coping methods is associated with the person's appraisal of controllability of the situation and whether the outcome is controllable. Cohen, Biran, Aran, and Tsur (2008) conducted a research with 30 cerebral palsied children to examine the interrelations among locus of control, disease severity, anxiety, and parenting style. They found that external locus of control was positively associated with anxiety and negatively associated with psychological adjustment of children with cerebral palsy. Moreover, Burkhart and Rayens (2005) showed that children with higher internal locus of control adjust better to illness. Similarly, in a study, conducted with patients with chronic kidney disease, it was found that internal health locus of control is significantly related to depression.

In conclusion, although there are few studies that examined the relation of health locus of control and adjustment, the findings showed that internal locus

of control is positively associated with adjustment in patients with chronic illnesses.

#### *1.3.1.4 Coping Methods*

The definition of coping changes according to the different theoretical perspectives like psychoanalytic, motivational, and transactional. Psychoanalytic perspective explains coping as a motivational ego process, involving realistic and flexible thoughts that contribute to more adaptive functioning (Haan, 1977 cited in Sandler, Wolchik, MacKinnon, Ayers & Roosa, 1997). From the motivational perspective, Skinner and Wellborn (1994) defined coping as an organizational construct explaining the regulation of individuals' own behavior, motivation, and emotion under stressful situations. The most noticeable definition is the transactional one. Lazarus (1991) defined coping as a cognitive and behavioral appraisal process that helps to manage the discrepancy between personal resources and external/internal demands of a situation. According to this definition coping is an intentional act and the function of coping efforts is to manage the emotional arousal in threatening situations (Sandler, Wolchik, MacKinnon, Ayers & Roosa, 1997)

Lazarus and Folkman categorized the coping methods into two broad dimensions based on the intended functions of coping; problem-focused strategies and emotion-focused strategies. Problem focused strategies are aimed to change the problematic situations, whereas emotion focused strategies are aimed to manage and reduce emotional distress (Lazarus & Folkman, 1984). Folkman and

Lazarus (1986) identified different ways of coping as serving problem or emotion-focused coping functions. Problem-focused coping includes planful problem solving, confrontive coping, and seeking instrumental social support. On the other hand, emotion-focused coping includes distancing, escape-avoidance, self-control, accepting responsibility, and positive reappraisal (Folkman, Lazarus, Gruen, & DeLongis, 1986).

Individuals use many different styles in order to cope with stress. Sarafino (1997) stated that the benefits of psychological preparations for medical procedures seem to depend on the patients' coping styles. People who use avoidance strategies prepare themselves for the medical operations by denying the situation (Sarafino, 1997). That is, patients faced with stressful medical operations tend to cope by using avoidance strategies to minimize the impact of the situation. They may deny that there is a threat; or they may refuse to seek or learn threatening information, perhaps by saying, "I don't want to learn"; or suppress unpleasant thoughts. In contrast, other individuals tend to use attention strategies, seeking detailed information about the situation to minimize the stress (Sarafino, 1997).

Children and adolescents with chronic illnesses face with variety of illness related problems such as threat of physical harm inflicted during the medical procedure, separation distress, and uncertainty regarding what will be done etc. during their life. These procedures increase children's anxiety and fear and consequently, they may have difficulty in coping with these stressors. Thus, coping ways of children are important in adaptation to stressful situations

(Compass, 1998). Coping efforts of children begin with the infant-mother relationship. That is, separation anxiety of the infant may be the infant's first experiences in coping with stress. Behaviors displayed by the infant in response to separation that promote the mother's return can be seen as the earliest form of coping an individual displays (Compas, 1998). There are three factors that affect children's responses to stress (Compas, 1998). Firstly, infant or young child is depended on adults for their survival. Their dependency indicates the need to include the child's social context in understanding his/her coping efforts, resources, and styles (Compas, 1998). Therefore, the relationship between the child and the environment represent the child's skills and resources. Secondly, the child's temperament leads to huge responsivity to stress and it influences the style that characterizes the child's coping (Compas, 1998). Thus, more responsive children need to cope with greater number of situations than less responsive children. The third factor is the basic features of cognitive and social development like self-efficacy beliefs, self-control or inhibitory mechanisms, friendships, and parental relationships. These factors are likely to affect what children experience as stressful and how they cope (Compas, 1998).

Literature about coping and adjustment suggested that there is a relation between coping methods and adjustment. Wodka and Barakat (2007) showed that children, who use maladaptive coping style experience more adjustment problems. Similarly, Hampel and Peterman (2006) found that although problem focused and emotion focused coping were negatively associated with emotional and behavioral problems, perceived stress and maladaptive coping was positively

related with adjustment problems in children with chronic illness. Zehnder, Prchal, Vollrath, and Landolt (2006) conducted a research with pediatric patients, who have a chronic illness, and they examined the influence of coping methods on psychological adjustment of children with different medical conditions. Zehnder et al. (2006) found that religious coping reduces post-traumatic stress symptoms. Similarly, active coping strategies were negatively related with internalizing and externalizing behavioral problems. Moreover, it was found that avoidance, support seeking strategies, and distraction had no impact on long-term psychosocial adjustment of pediatric patients. Although most of the researchers found that there is a correlation between coping and psychological adjustment, Dahlbeck and Lightsey (2008) showed that both acceptance coping and avoidance coping are not related to psychological adjustment of children with disabilities and chronic disorders, but emotion focused coping is associated with poorer psychological adjustment. Engel, Schwartz, Jensen, and Johnson (2000) conducted a research with 50 cerebral palsied patients demonstrating the association of coping methods used in chronic pain and adjustment to that pain. The results of the research revealed that patients with CP use cognitive coping strategies and these strategies are positively related with adjustment to the pain.

#### *1.3.1.5 Family Functioning*

Previous studies with families of healthy and ill children have shown the role of the family functioning in children's psychological adjustment (Cohen, Biran, Aran, & Tsur, 2008; Friedman, Holmbeck, Jandasek, Jill Zukerman, & Abad,

2004; Davis, Brown, Bakeman, & Campbell, 1998; Szyndler, Towns, Asperen, & Kay, 2005; Britner, Morog, Pianta, & Marvin, 2003). In these studies the role of the family is measured mostly in terms of the dimensions of cohesion, expressiveness, independence, organization, and control. Szyndler et al. (2005) conducted a research with adolescents with cystic fibrosis and they found that family cohesiveness, expressiveness, and organization were associated with better psychological functioning in these young people. Similarly, Low and Stoker (2005) examined the relations between parents' depressed mood, marital conflict, parent-child hostility, and children's adjustment. They revealed that both mothers' and fathers' marital hostility is linked to children's internalizing problems. And also, fathers' depressed mood was associated with children's internalizing problems and externalizing problems. Moreover, Friedman et al. (2004) tested the family functioning in three domains, which were parenting stress, individual psychosocial adjustment, and marital satisfaction. Their findings revealed that all these three domains are significantly associated with children's adjustment. That is, less adaptive levels of family functioning is related to externalizing behaviors in children with chronic illness.

#### *1.3.1.6 Parental Adjustment*

Parental adjustment is another important factor in children's adjustment. In the literature it is showed that both family functioning and parental stress/distress affect the children's adjustment (Davis et al. 1998; Dewey & Crawford, 2007; Thompson et al. 1999). The literature suggested perceived stress, perceived social

support, family cohesion, coping methods (palliative coping techniques), and daily stress as the variables that are correlated with parental adjustment (Skok, Harvey, & Reddihough, 2006; Dewey & Crawford, 2007; Thompson et al. 1999, Davis et al. 1998). Thompson et al. (1999) stated that mothers with good adjustment significantly differ from mothers with poor adjustment; they have lower levels of daily stress, palliative coping, and illness related stress. In a study conducted with the mothers of children with chronic childhood disease it was revealed that poorer levels of adjustment were associated with lower levels of social support and family cohesion (Dewey & Crawford, 2007). Similarly, Skok et al. (2006) found that perceived stress and perceived social support are significantly correlated with well being of mothers with chronically ill children. Additionally, in a study conducted with mothers of children with cerebral palsy, the factors that influence parenting stress were examined (Glenn et al. 2008). They found that individual characteristics of coping and feeling in control, family support and cohesion are associated with mothers stress.

As it is mentioned above, parental adjustment, specifically maternal adjustment, is included among the variables that are associated with the adjustment of children with chronic illness. Studies in literature have shown that there is a positive relationship between parental stress and mother-reported child adjustment. For instance, in a study that included the mothers of end stage renal disease, it was found that mothers with more psychological problems rated their children as having more behavior problems, and mothers using more adaptive

coping strategies perceived their children as having higher levels of pro-social behaviors (Madden et al. 2002).

### *1.3.2 Models of Adaptation*

#### *1.3.2.1 Biopsychosocial Model*

Biopsychosocial model is a conceptual framework that integrates biological, psychological, and social factors to understand the chronic illness. According to Engel (1977), biological, psychological, and social factors are interrelated, and these relationships affect both the process and outcomes of the illness. Biopsychosocial framework investigates that chronic illnesses do not manifest themselves only in terms of pathophysiology, but also they may simultaneously affect many different levels of functioning from cellular to organ, to person, to family, and to society (Engel, 1977). Studies conducted with chronic illnesses like diabetes mellitus, cystic fibrosis, spinal bifida, and cancer patients (Chaney et al., 1997; Hocking & Lochman, 2005; Tamara, Anna, Suzanne, David, & David, 2009; Ownsworth, Hawkes, Steginga, Walker, & Shum, 2009) strengthened the model.

Chronic illness, as a biological event, has an important effect on the development of the child's interaction with his or her physical and social environments. This effect can be direct in terms of biological dysfunctions or limitations, and indirect through psychosocial developmental tasks constituted from normal child experiences and illness specific tasks (Thompson & Gustafson, 1996; Munitz & Rudnick, 2000). That is, chronic illness is a potential stressor that

the child and the family have to adapt. In the adaptation process, as it is shown in the model, biological, psychological, and social factors have important roles in adjustment. There are major models that explain the adaptation processes of children to chronic illness in the light of biopsychosocial model; the risk–resistance model, and the transactional stress and coping model.

#### *1.3.2.2 Risk–Resistance Model*

In the risk-resistance model of Wallander et al. (1989) it was proposed that risk factors, such as disease parameters, functional independence, and psychosocial stressors; and resistance factors such as intrapersonal characteristics, social factors, and stress processing mediate and moderate the relation between disability stress and adjustment (cited in Daniels, Moos, Billings, & Miller, 1987).

Disease severity is one of the risk factors that predict variations in psychological functioning. Children, whose disease is more serious or painful, are at higher risk for psychological dysfunction (Manuel, 2001). Moreover, it was found that psychosocial stress of children with juvenile rheumatoid arthritis decreases their psychological adjustment (Manuel, 2001). Conversely, according to the model some protective factors like adaptive stress processing increases the adjustment (Daniels, Moos, Billings, & Miller, 2005; Thompson & Gustafson, 1996).

To sum up, one way to understand the adaptation processes of patients with chronic illness is to determine the risk and resistance factors of the patient.

#### *1.3.2.3 Transactional Stress and Coping Model*

The transactional stress and coping model (Thompson et al., 1992) is one of the models that explain the pathways of child adaptation to chronic illness. According to the transactional stress and coping model, chronic illness is a potential stressor that the child and the family have to adapt. In the adaptation process to the chronic illness, there are transactions among biomedical, developmental, and psychosocial processes; and these transactions affect the illness–outcome relationship (Thompson & Gustafson, 1996) (see figure 1). Illness parameters, demographic parameters, maternal adaptational processes, and child adaptational processes are main domains. Illness parameters involve type of illness and its severity. Additionally, demographic parameters include child's gender, age, and SES. According to the model, family and patient processes mediate the illness-outcome relationship with the contribution of demographic and illness parameters (Thompson & Gustafson, 1996).

Lazarus and Folkman's (1984) theoretical cognitive stress and coping model, where adjustment to a stressor is mediated by the use of different coping processes, guided the choice of adaptational processes included in the transactional stress and coping model (Thompson & Gustafson, 1996). Moreover, within the system theory perspective, it is hypothesized that levels of stress experienced by family members affect the adjustment of ill children. Therefore, adaptational processes are examined in terms of both maternal adjustment, child adjustment, and their relationship (Thompson & Gustafson, 1996).

In this model, to explain the psychological adjustment of adults with chronically ill children, three types of psychosocial mediational processes are

used. These are cognitive processes, coping methods, and family functioning. The first component of maternal adaptational processes, cognitive processes, includes stress appraisal, expectations of locus of control, and efficacy. The second component of the adaptational processes, coping methods, involves adaptive and palliative coping methods. Adaptive coping, or problem focused coping, involves changing the stressful transaction between the environment and person by attempting to change the environment or the self. Moreover, the transactional stress and coping model views palliative methods of coping as a combination of avoidance, wishful thinking, and emotion-focused coping, where attempts are made to regulate the emotions that are associated with stress (Thompson & Gustafson, 1996). The third component, which is family functioning, includes supportive, conflicted, and controlling type of functioning (Thompson & Gustafson, 1996).

Adaptational processes that explain psychological adjustment of children with chronic illnesses in a different way as compared to maternal adaptational processes. Accordingly, adjustment of children consists of two types of processes, which are the cognitive processes of expectations about self esteem and health locus of control and methods of coping (Thompson & Gustafson, 1996).

As Figure 1 shows, different adaptational processes are specified for mothers and children. The model indicates that although only the mother's appraisal of stress has an impact on adjustment of mother, both the child and mother's expectations of treatment efficacy and health locus of control have an impact on child's adjustment. Furthermore, the model's third component, family

functioning, does only impact on the maternal adjustment. Although these different variables affect maternal and child adjustment independently, the model suggests that maternal and child adjustment affect each other mutually.

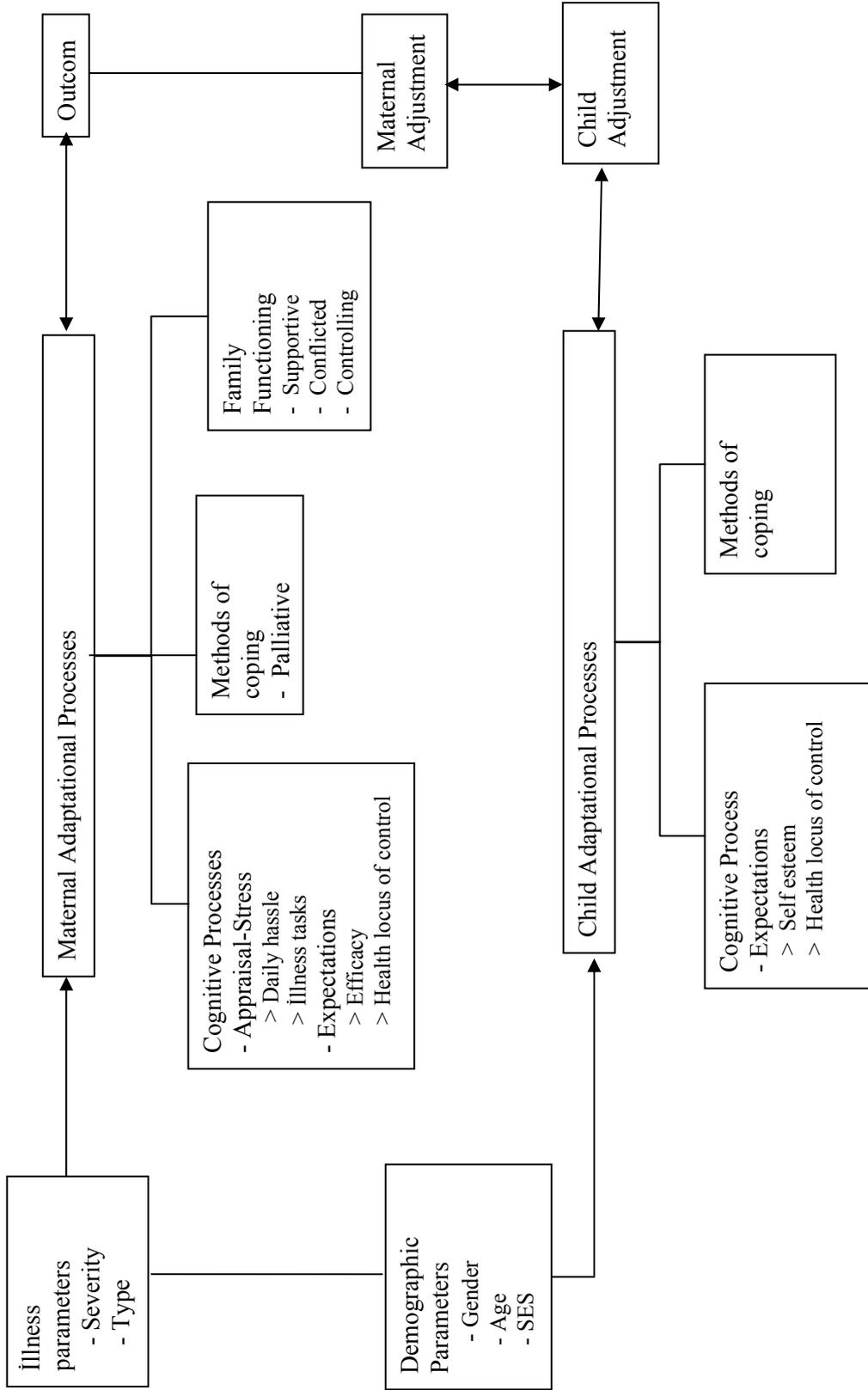


Figure 1. Transactional stress and coping model of adjustment of chronic illness. Source: Thompson & Gustafson, 1996

#### *1.3.2.3.1 Studies about Transactional Stress and Coping Model*

A number of studies have been conducted to test this model by using children with cystic fibrosis, spinal bifida, sickle cell disease, juvenile rheumatic diseases, and insulin dependent diabetes mellitus and also by using the mothers of these children (Thompson & Gustafson, 1996; Thompson et al., 1998; White, Chaney, Mullins, Wagner, Hommel, Andrews, & Jarvis, 2005; Chaney, Mullins, Frank, Peterson, Mace, Kashani, & Goldstein, 1997; Hocking & Lochman, 2005). These studies hypothesized maternal, child, and family mediational processes, and their interrelationships over time. Moreover, they investigated the stability and change in adjustment processes.

Cross sectional and longitudinal studies supported the model by studying the role of maternal and child adaptational processes in both maternal and child adjustment to chronic illness. For instance, in a cross-sectional study conducted by Thompson et al. in 1992 with cystic fibrosis patients, illness parameters accounted for 9% of the variance in mother reported internalizing behavior problems, 1% of the variance in externalizing behavior problems, and 3% of the variance in child reported symptoms. Additionally, demographic parameters accounted for 9% to 11% of the variance in both child and mother reported problems. However, when the illness and demographic parameters were controlled, child self worth led to significant increase in the variance in mother reported externalizing (14%) and internalizing behavior problems (11%) and child reported symptoms (44%). Maternal psychological problems like anxiety did also account for a significant increment in externalizing (16%) and internalizing (10%)

behavior problems and child reported symptoms (6%). Finally, transactional stress and coping model accounted for 39% of the variance in mother reported internalizing and 43% of the variance of externalizing behavior problems, and also 68% of the variance of child reported symptoms (cited in Thompson & Gustafson, 1996 p. 97).

In a study applying the model to the children with insulin-dependent diabetes mellitus and their mothers and fathers following results were obtained. After controlling demographic and illness parameters, increment in fathers' distress was associated with child distress. Although increment in mother's distress was associated with child distress, this association was not significant. That is, father's adjustment was significantly associated with poorer child adjustment than mothers' adjustment over the same time period. Moreover, this study indicated that father-child transactional relationship is an important element in the adjustment of insulin dependent diabetes mellitus (Chaney et al. 1997).

In another study researchers tested the cognitive processes in psychological adjustment of children with cystic fibrosis and sickle cell disease (Thompson et al., 1998). According to the results of the study, two groups of children did not differ significantly from each other based on their adjustment to the illness. When their behavior problems were examined, it was found that children with cystic fibrosis (22.5% - 12.5%) experienced more externalizing behaviors than children with sickle cell disorder (2.5% - 5%). Additionally, in children with cystic fibrosis higher levels of perceived stress, lower levels of

perceived efficacy, and lower levels of internal health locus of control accounted for 37% of the variance in adjustment.

In conclusion, the transactional stress and coping model explains the pathways of child adaptation to chronic illness. Studies conducted with cystic fibrosis, spinal bifida, sickle cell disease, juvenile rheumatic diseases, and insulin dependent diabetes mellitus showed that in adaptation to chronic illness maternal adaptation processes, maternal and child cognitive processes, child coping methods, and child self concept are significant predictors. In present study, within the framework of the model the predictors of the adjustment of the spastic cerebral palsied children will be measured.

#### *1.4 Aims of the Present Study*

In the present study, the adjustment processes of the children to cerebral palsy were examined within the framework of the transactional stress and coping model. Cerebral palsy is a life long illness. These children born with this illness and they have to live with it until they die. Children experience many difficulties while growing up. There is not such a study in Turkey examining the psychological adjustment processes of cerebral palsied children. The aim of the present study is to examine the factors that influence the psychological adjustment of children with CP. Specifically, parental stress, family functioning, parental adjustment, parent's coping methods, child's coping methods, and child self concept were studied in relation to child's adjustment.

Based on the all of the findings mentioned in the introduction chapter, the hypotheses are;

(1) Sociodemographic characteristics such as gender of children and education of parent, will be related to the outcome variables like parental stress, problem solving / optimistic coping, fatalistic coping, seeking social support and helplessness coping, family functioning, parental adjustment, child self concept, child positive / negative coping, and child adjustment. (2) Higher parental stress would be related to lower adjustment in children with CP; (3) Parent's who use problem solving/optimistic coping strategies would have better adjusted children; (4) Children who have functional family pattern, would adjust better; (5) Better parental adjustment would be related to better adjustment in children (6) Higher self-esteem among children with CP would predict higher adjustment; and (7) Children's use of adaptive coping strategies would be related to better adjustment.

## CHAPTER II

### METHOD

#### 2.1 *Participants*

The sample consists of 80 children with cerebral palsy and one of their parents who were being followed at Metin Sabancı Baltalimanı Bone Diseases Training and Research Hospital. The age of the children ranged between 6 and 16 with a mean of 10,15 ( $SD = 2, 21$ ). Of these children, 42 (52%) were female and 38 (47%) were male. While 43.8 % of the children were first born children, 30% of them were middle born, and 21% were last born children. The age of the parents participating to the study was ranging between 30 and 52 (mean = 39.64,  $SD = 6.14$ ). While 70% ( $n = 56$ ) of the parents were mothers, fathers constituted only 30% ( $n = 24$ ) of them. Education levels of the parents were as follows: 63.7% low education; consists of primary school, middle school and literate ( $n = 51$ ), 36.3% high education; consist of high school and university ( $n = 29$ ). All of the parents were married (100%). The majority of the parents were living in big cities (81.3%,  $n = 65$ ). Other parents were living in cities (7.5%,  $n = 6$ ), in towns (7.5%,  $n = 6$ ), and in villages (7.5%,  $n = 3$ ). Parents who reported their income level as

high constituted 66.2% ( $n = 53$ ) of the participants, while the remaining parents reported their income as low (33.8%,  $n = 27$ ). Furthermore, 95% of the parents stated that they have no physical illnesses, and similarly, 93% of the parents did not state any psychological illnesses. Finally, 86.3% ( $n = 69$ ) of the parents reported their children as not having any behavior problems (See Table 1 for the demographic characteristics of the sample).

**Table 1**  
*Demographic Characteristics of the Sample*

	N	%	Mean	SD
Child Gender				
Female	42	52		
Male	38	47		
Parent Gender				
Female	56	70		
Male	24	30		
Child Age			10.15	2.22
Parent Age			39.64	6.14
Parent Education				
Low	51	63.7		
High	29	36.3		
Marriage				
Married	80	100		
Divorced	0	0		
Single	0	0		
Job				
Civil Servant	8	10		
Self Employment	34	42.5		

	N	%	Mean	SD
Housewife	33	41.3		
Unemployed	5	6.3		
Living Place				
Big City	65	81.3		
City	6	7.5		
Town	6	7.5		
Village	3	3.8		
Income Level				
Low	27	33.8		
High	53	66.2		
Parent Physical Illness				
Yes	4	5		
No	76	95		
Parent Psychological Illness				
Yes	5	6.3		
No	75	93.8		
Child Behavior Problems				
Yes	11	13.8		
No	69	86.3		
Child Birth Order				
First	35	43.8		
Middle	24	30.0		
Last	21	26.3		

## *2.2 Measures*

The data was collected from both children with CP and one of their parents. Demographic information form and four self-report questionnaires were administered to one of the parents of children with CP and two self-report questionnaires were collected from children. While parents filled out Demographic Information Form, Ways of Coping Inventory (Folkman & Lazarus, 1980), Symptom Checklist (SCL-90) (Derogatis, 1977), The Caregiver Well-Being Scale (Berg-Weger, Rubio, & Tebb, 2000), Hacettepe Adjustment Scale (Öktem & Gökler, 1985), and The Macmaster Family Assessment Device (Epstein, Baldwin, & Bishop, 1983), children completed Piers-Harris Children's Self-Concept Scale (Piers & Harris, 1969) and Ways of Coping Inventory for Children (Spirito, Stark, & Williams, 1988).

### *2.2.1 Demographic Information Form*

This form was prepared by the investigator in order to obtain information about demographic characteristics of the child and the caregiver. This form was composed of two parts. The first part involved questions about the child such as the age, gender, birth order of the ill child etc. The second part included information about the caregiver like age, gender, education status, income etc. (*see appendix A*).

### *2.2.2 The Ways of Coping Inventory*

Ways of coping inventory was administered in order to examine the behavioral and cognitive strategies that people use under stressful conditions. It was developed by Folkman and Lazarus (1980) and it has been revised by the same authors (Folkman & Lazarus, 1985). In 1985, Folkman and Lazarus conducted a research, and after factor analysis, they revealed eight subscales for ways of coping inventory. These subscales were problem-focused coping, wishful thinking, distancing, seeking social support, emphasizing the positive, self-blame, tension - reduction, and self-isolation. The Cronbach alphas ranged between .56 and .85. The inventory was adapted to Turkish by Siva (1991) with the Cronbach alpha coefficient .90 (cited in Gençöz, Gençöz, & Bozo 2006). The Turkish version of the scale includes 74 items.

Karancı, Alkan, Akşit, Sucuoğlu, and Balta (1999), used the ways of coping inventory with the survivors of Dinar earthquake. After deleting some items and making some minor changes due to the results of the pilot study, a 61 item form of ways of coping inventory with a three-point scale (1 = never, 2 = sometimes, 3 = always) (*see* appendix C) was used. One item was deleted because of the difficulty in comprehension. With a factor loading of .35, the factor analysis yielded five factors. Seven items were excluded due to not meeting the criterion. The factors were problem solving, fatalistic approach, helplessness approach, and seeking social support. The Cronbach alphas of the factors were between .39 and .78.

In the current study, the 42-item ways of coping inventory form obtained from Karancı et al. (1999) study was used to assess the type and the frequency of

coping strategies of the parents to overcome with the difficulties related to having a child with cerebral palsy. In present study, based on factor analyses 4 items were deleted from the inventory and the remaining 38 items loaded on 3 factors. The cronbach alpha coefficients of the factors were .89 for problem solving and optimistic coping subscale, .86 for fatalistic coping subscale, and .63 for seeking social support, helplessness, and self blaming subscale.

### 2.2.3 *Symptom Checklist (SCL-90)*

The Symptom Checklist (SCL-90) was originally developed by Derogatis (1977) to evaluate the general psychological health. The short version (Brief Symptom Inventory) with 53 items was adapted to Turkish by Şahin and Durak (1994). The Response options of the scale range between 0 = *never have* and 4 = *always have* (see appendix D). The reliability coefficients of the 9 subscales range between .71 and .85 in the original scale. The reliability coefficient of the Turkish version of the subscales range between .55 and .86 (Şahin & Durak, 1994, cited in Öner, 2006, p. 731). The scale includes statements about physical and psychological symptoms. This checklist was used in the present study in order to measure parental adjustment; and higher scores on it indicate experiencing higher levels of psychological symptoms and lower psychological adjustment. In the present study, the cronbach alpha coefficient of the checklist was found as .98.

### 2.2.4 *The Caregiver Well-Being Scale*

The Caregiver Well-Being Scale was developed by Tebb (1995), to measure the daily functioning of the caregivers with the existence of their caregiver role (Berg-Weger, Rubio, & Tebb, 2000). It was adapted to Turkish by Demirtepe and Bozo (2009). The scale consists of two subscales, which are basic needs and activities of living subscales. Basic needs subscale consists of the daily needs of the caregiver. It includes 22 items and the response options of the subscale range between 1= *never* and 5= *always* (see appendix E). Higher scores on this subscale means the caregiver is able to satisfy his/her basic needs adequately. The internal consistency reliability coefficient of this subscale was .93. The correlation analyses between basic needs subscale and Beck Depression Inventory revealed that they are negatively related with each other. Therefore, basic needs subscale seems to be a valid scale. The activities of living subscale consists of the non-caregiving activities of the caregiver and it includes 23 items. Similar to basic needs subscale, the response range of the subscale is between 1= *never* and 5= *always* (see appendix E). In this subscale, having higher scores means that the activities outside caregiving are done by the caregiver and the role strains of the caregiver are low. Cronbach's alpha coefficient for the activities of living subscale was .89. Similar to basic needs subscale, activities of living subscale is negatively related with depression and positively related with general well being. This suggests that this subscale is a valid scale (Demirtepe & Bozo, 2009).

In the present study, this scale was used to measure stress level of the parents. Higher scores on this scale means lower levels of stress. The cronbach's alpha coefficient of the whole scale for the present sample was found .95.

#### *2.2.5 The McMaster Family Assessment Device*

The family assessment device is a self report inventory and it was developed to measure various functions of family and to find out the problematic areas in the family. The McMaster Family Assessment Device was developed by Epstein, Baldwin, and Bishop (1983). It was adapted into Turkish by Bulut (1990). The Turkish version of the scale is composed of 60 items and 7 subtests assessing problem solving, communication, roles, affective responsiveness, affective involvement, behavior control, and general functions. In general, problem solving refers to the family's ability to solve problems together. The communication describes the effectiveness, directness, and clarity of the information exchanged within the family. The roles subtest reflects the efficacy with which family tasks are accomplished. The affective responsiveness refers the ability of family members to respond to situations with appropriate emotions. Moreover, affective involvement reflects the concern that they feel for each other, and behavior control gives information about the standards and attitudes for behavior. Finally, general functions subscale gives overall rating of family functioning. The Response options of the scale range between 1 = *completely agree* and 4 = *completely disagree*. (see appendix B) Higher scores on the scale indicate a dysfunctional family pattern.

The Cronbach alpha's of subtests ranged between .38 and .86 (Bulut, 1990). Test-retest reliability was between .62 and .90 in a three week interval (Bulut, 1990). Internal validity was between .38 through .80 for the family assessment subtests and .86 for the general functions (Bulut, 1990).

In the present study, the scale was used to measure the functioning of the families with cerebral palsied children. The whole scale was used with the Cronbach alpha coefficient of .93.

#### *2.2.6 Hacettepe Emotional Adjustment Scale*

The Hacettepe Emotional Adjustment Scale was developed by Gökler and Öktem in 1985. The scale measures the emotional adjustment of the children and it includes 32 items rated on a 3-point scale (0= absent, 1= slightly, 2= much) (*see* appendix F). The first 24 items assess the emotional adjustment of children and are summed to find a total score with cut-off point of 12. Children, who take a total adjustment score 12 or above, are regarded as maladjusted. Additionally, odd and even number items are summed together and two subscale scores are generated. These subscales are Neurotic Problems Subscale and Behavior Problems Subscale. Higher scores on whole scale indicate that the child has more problems. Among the remaining eight items, six of them measure the specific childhood problems like nail biting, one item measures school performance, and the last item asks other problems that the scale is not mentioned. The cronbach alpha coefficients of the Neurotic Problems Subscale, Behavior Problems

Subscale, and Total Adjustment score were .82, .83, and .87, respectively (cited in Öner, 2006, p. 116).

In the present study the scale was used to measure the psychological adjustment of children with cerebral palsy. The cronbach alpha coefficient of the scale for the present sample was .89.

### *2.2.7 Ways of Coping Inventory for Children (KIDCOPE)*

*KIDCOPE* (Spirito, Stark, & Williams, 1988) was developed to assess different types of coping that children and adolescents employ in a given situation (cited in Gökler, 2001, p. 76). This inventory consists of 15 items. The measure was designed to assess the frequency of the use of 10 different coping strategies; namely, distraction, social withdrawal, cognitive restructuring, self-blaming, blaming others, problem-solving, emotional regulation, wishful thinking, social support, and resignation.

In order to draw a reliable picture of the children's general coping pattern with emotional stress, a specific stressor is named (in the current study, "the worst thing that happened to you because of the surgery and physical rehabilitation"), and the researchers asked the participants to specify 3 recent affective situations that they encountered during or after the surgery. In the original form of *KIDCOPE*, with respect to a stressful event (in this case, surgery and rehabilitation) the children were asked to indicate how frequently s/he used each of the coping strategies to cope with the stressor, using a 4 point scale (0 = not at all, 1 = sometimes, 2 = a lot, 3 = almost all the time). Gökler (2001) reduced the

scale into a 3-point response format (0: not at all, 1: sometimes, 2: almost all the time) (*see* Appendix G).

In the present study this scale was used to measure the coping method of children with CP. By conducting factor analysis, two factors were obtained; positive and negative coping with cronbach's alpha coefficient of .71 and .53, respectively.

### *2.2.8 Piers – Harris Children's Self – Concept Scale*

Piers – Harris Children's Self – Concept Scale was developed by Piers and Harris in 1969 to measure children's self esteem. It was adapted to Turkish by Çataklı and Öner in 1986 (cited in Öner, 2006, p. 814). It is a self-report inventory consisting of 80 items and 6 subtests. These subtests are behavior, physical appearance, anxiety, popularity, and happiness/satisfaction. Children respond the items with "Yes/No" answers (*see* appendix H), which are scored as 1 or 0. Higher scores indicate positive, lower scores indicate negative thoughts and feelings about self.

The test–retest reliability coefficients ranged between .72 and .91 for primary school children and between .79 and .98 for junior high school children. Kuder Richardson reliability coefficient was .87 for primary school children and .86 for junior high school children (Öner, 2006). The validity evidence was obtained by analyzing the correlation coefficient between Piers-Harris children's self-concept scale and test anxiety inventory scores ( $r = -.50$  for primary school children and  $r = -.47$  for junior high school children).

In the present study, this scale was used to measure the self concept of the children. The cronbach alpha of the scale was found .91 for the present sample.

### *2.3 Procedure*

The participants were selected from Metin Sabancı Baltalimanı Bone Diseases Training and Research Hospital. The researcher took the telephone numbers of the patients, who received the diagnosis of spastic cerebral palsy from the hospital, and called the families of the patients to arrange an appointment. In the appointments the researcher introduced herself and explained the aims of the study. The participants who gave consent were included to the study. Since the children were suffering from CP, they had problems with writing. Therefore, the researcher read the questionnaires and marked the answers for them. Similarly, because of their education level and problems in reading, some of the caregivers needed the questions being read to them. Thus, the researcher read the questions and marked the answers for them, too. Total time for completing the questionnaire was approximately 75 minutes. There was no time limit for completing the questionnaires, so the participants, especially the children, could take breaks during the administration of the questionnaires.

### *2.4 Data Analysis*

The data was analyzed by using Statistical Package for Social Sciences (SPSS) (Green, Salkind & Akey, 1997). In order to test all the hypotheses of the main study independent sample t-test, and regression analyses were conducted.

## CHAPTER III

### RESULT

The results will be presented in separate sections. Firstly, the results of factor analyses for Ways of Coping Inventory and Ways of Coping Inventory for Children will be presented. Secondly, mean differences of demographic characteristics of participants will be given. Then, correlations among the continuous variables will be presented. Finally, the predictors of child adjustment will be given.

#### 3.1 *Factor Analysis of Ways of Coping Inventory (WCI)*

The responses to the 42 items of WCI were subjected to factor analysis using principal component analysis (PCA) with varimax rotation. The initial analysis resulted in 11 factors employing eigenvalue of 1.00 and explained 72.50% of the variance. With the use of scree plot three factors were used in the final analysis. The total explained variance by the 3 factors was 43%. A factor loading of .30 was used as the criterion to determine the item compositions of the 3 factors. Each item was included under the factor on which it had the highest loading. Although, item 29, 36, and 40 had loadings under factors, they were excluded because of their irrelevant theoretical fit with their factors. Moreover,

item 3 did not load under any of the factors. Thus it was excluded from further analysis.

The first factor, “problem solving / optimistic coping”, explained 19.07% of the total variance. The Cronbach’s Alpha for the “problem solving / optimistic coping” factor was found to be .89.

The second factor, which was named as “fatalistic coping”, explained 16.07% of the total variance. The Cronbach’s Alpha for the “fatalistic coping” factor was found to be .86.

The third factor, named as “seeking social support (SSS) / helplessness / self blame coping”, explained 8.19% of the total variance. The Cronbach’s Alpha for the “seeking social support / helplessness / self blame coping” factor was found to be .63.

Item 4, Item 35, Item 13, Item 12, and Item 1 had crossloads and they were included in the factors that were theoretically more appropriate. Item loadings, communalities, eigenvalues, and proportion of variance explained by the factor analysis are displayed in Table 2.

**Table2**

Item Composition of the WCI factors, Their Factor Loadings, Percentage of Explained Variance, and Cronbach Alpha Values

No	Item	Factor1 (Problem S./ Optimistic)	Factor2 (Fatalistic )	Factor3 (SSS/ Self Blame)
<b>Factor 1 Problem Solving / Optimistic <math>\alpha = .89</math> Explained Variance = 19.07 %</b>				
31	I make a plan of action and follow it	.76	-.10	-.30
42	I change or grow as a person	.68	.05	-.03
25	I come out of with couple of different solutions the problem	.68	-.18	.02
28	I just concentrate on what I have to do next	.67	-.16	-.06
22	I stand my ground and fight for what I wanted	.67	-.33	-.05
11	I try to understand the seriousness of the situation	.66	-.11	-.06
39	I inspire to do something creative about the problem	.65	-.10	-.21
7	I try to analyze the problem in order to understand it better	.64	.06	.13
8	I maintain pride and keep a stiff upper lip	.62	-.04	.08
19	I know what have to be done. so I double my effort to make things work	.62	-.39	.39
38	I try not to act very hastily or follow my first hunch	.59	.07	-.31
27	I try to adopt a new perspective	.55	-.27	.23
6	I try to think calmly and not get angry	.53	-.01	.14
23	I bargain or compromise to get something positive from the situation	.53	-.16	.46
12	I feel helpless	-.41	.45	-.21
5	I make light of the situation; I refuse to get too serious about it	.39	.28	.14
1	I turn to work or another activity to take my mind off	-.37	-.01	.45
<b>Factor 2 Fatalistic <math>\alpha = .86</math> Explained Variance = 16.07 %</b>				
37	I believe that God knows the best	-.01	.83	-.05
34	I think what happens is my fate	-.26	.75	.17
24	I think that it is my destiny and it does not change	-.16	.72	-.04
15	I pray for help	.06	.64	.17

**Table2**

Item Composition of the WCI factors, Their Factor Loadings, Percentage of Explained Variance, and Cronbach Alpha Values

No	Item	Factor1 (Problem S./ Optimistic)	Factor2 (Fatalistic )	Factor3 (SSS/ Self Blame)
10	I go along with fate; sometimes I just have bad luck	-.12	.62	-.18
9	I try to forget the whole thing	.03	.62	-.13
16	I try to be happy with what I have	.14	.61	.23
14	I think that everything in life has a positive side	.13	.56	.18
20	I think that it depends on how it develops	-.38	.54	-.08
2	I hope for a miracle	-.20	.53	.04
32	I quit fighting	-.22	.53	-.17
30	I give money to poor people to escape my trouble	.39	.43	.02
<b>Factor 3 SSS/Helplessness/ Self Blame <math>\alpha = .63</math> Explained Variance = 8.19 %</b>				
21	I ask friends before I make and action	.06	-.02	.75
26	I wish that I can change what has happened	-.01	.06	.63
33	I think that I make the problems	-.12	.19	.48
35	I think if only I were stronger	-.23	.56	.39
4	I expect others to help me in solving my problems	-.55	.25	.35
41	I try to be assertive and defend my right	.21	.05	.34
17	I cannot help thinking about the problem	-.29	-.00	.33
18	I express anger to the person(s) who cause the problem	.26	.14	.33
13	I expect understanding from people to whom I express my feelings	-.13	.49	.32

### *3.2 Factor Analysis of Ways of Coping Inventory for Children (KIDCOPE)*

The responses to the 13 items of KIDCOPE were subjected to factor analysis using principal component analysis (PCA) with varimax rotation. The initial analysis resulted in 6 factors employing eigenvalue of 1.00 and explained 72.36% of the variance. With the use of scree plot two factors were used in the final analysis. The total explained variance by the 2 factors was 37.18%. A factor loading of .30 was used as the criterion to determine the item compositions of the 2 factors. Each item was included under the factor on which it had the highest loading. Item 4 and Item 13 was extracted from the analysis due to not meeting the criterion.

The first factor, “positive coping”, explained 22.70% of the total variance. The Cronbach’s Alpha for the “positive coping” factor was found to be .71.

The second factor, which was named “negative coping”, explained 14.49% of the total variance. The Cronbach’s Alpha for the “fatalistic coping” factor was found to be .53.

Item loadings and proportion of variance explained by the factor analysis are displayed in Table 3

**Table 3**

Item Composition of the WCI factors, Their Factor Loadings, Percentage of Explained Variance, and Cronbach Alpha Values

No	Item	Factor 1 (Positive Coping)	Factor 2 (Negative Coping)
<b>Factor 1</b>			
<b>Positive Coping <math>\alpha = .71</math></b>			
<b>Explained Variance = 22.70 %</b>			
11	Try to calm myself down	.77	-.01
14	Try to feel better by spending time with others like family, grownups, or friends	.63	.12
5	Try to see the good side of things	.60	.12
7	Blame someone else for causing the bad things that happened	-.59	-.03
8	Try to fix the bad things	.55	-.19
6	Blame myself for causing the bad things that happened	-.52	.01
9	Try to fix the bad things by doing something or talking to someone	.48	-.35
1	Just try to forget it	.43	.14
<b>Factor 2</b>			
<b>Negative coping <math>\alpha = .53</math></b>			
<b>Explained Variance = 14.49 %</b>			
10	Yell, scream, or get mad	-.25	.72
15	Didn't do anything because the bad things couldn't be fixed	.06	-.69
2	Do something like watch TV or played a game to forget it	.09	.61
12	Wish the bad things had never happened	.37	.46
3	Stay by myself	.21	.31

### 3.3 Mean Differences of Demographic Characteristics of Participants

In order to compare the participants belonging to different levels of the categorical variables (child gender, parent gender, education of parent, income level) in terms of the continuous variables (parental stress, problem solving/optimistic coping, fatalistic coping, seeking social support/helplessness/self-blame coping, family functioning, parental adjustment, child self concept, child positive/negative coping, child adjustment) four independent sample t-tests were conducted (See Table 4).

An independent sample t-test was conducted to examine the possible differences between the both genders of children in terms of the continuous variables (parental stress-reversed, problem solving/optimistic coping, fatalistic coping, seeking social support/helplessness/self-blame coping, family functioning, parental adjustment, child self concept, child positive/negative coping, child adjustment) used in the study. The analysis revealed that parents with male children ( $m = 146.87, sd = 27.03$ ) experience less stress than parents with female children ( $m = 132.31, sd = 34.31$ ),  $t = -2.09, p < .05$ . On the other hand, there was no significant difference among female and male children in terms of problem solving/optimistic coping, fatalistic coping, seeking social support/helplessness/self-blame coping, family functioning, parental adjustment, child self concept, child positive/negative coping, and child adjustment.

Another independent sample t-test was conducted to examine the possible differences between the both genders of parents in terms of the continuous variables of the study. The analysis yielded that mothers ( $m = 134.66,$

$sd = 32.75$ ) experience more stress than fathers ( $m = 149.87, sd = 26.88$ ),  $t = -2.00, p < .05$ . Similarly, mothers ( $m = 131.57, sd = 29.68$ ) reported more dysfunctional family pattern than fathers ( $m = 116.04, sd = 21.76$ )  $t = 2.31, p < .05$ . On the other hand, there was no significant difference among female and male children in terms of problem solving/optimistic coping, fatalistic coping, seeking social support/ helplessness/self-blame coping, parental adjustment, child self concept, child positive/negative coping, and child adjustment.

Another independent sample t-test was run to examine the possible differences among education levels of parents in terms of continuous variables of the study. The analysis revealed significant differences. The parents differed significantly among education groups in terms of parental stress fatalistic coping ( $t(78) = 2.92, p < .05$ ), family functioning ( $t(78) = 1.93, p < .05$ ), child positive coping ( $t(78) = -2.55, p < .01$ ) and child negative coping ( $t(78) = -4.63, p < .001$ ). The analysis indicated that parents in low education group ( $m = 27.63, sd = 4.97$ ) used more fatalistic coping than parents in high education group ( $m = 24.27, sd = 4.85$ ). In terms of family functioning parents in low education group ( $m = 131.45, sd = 28.69$ ) reported more dysfunctional family pattern than parents in high education group ( $m = 118.93, sd = 26.28$ ). In terms of child positive coping, the child whose parents were in high education group ( $m = 20.36, sd = 2.4$ ) use more positive coping than low education group ( $m = 18.68, sd = 3.02$ ). Similarly, the child whose parents were in high education group ( $m = 12.34, sd = 1.65$ ) use more negative coping than low education group ( $m = 10.23, sd = 2.11$ ).

The final independent t-test was run to examine the possible differences among income groups in terms of continuous variables of the study. The analysis revealed several significant differences. The parents differed significantly among income groups in terms of parental stress ( $t(78) = -5.01, p < .001$ ), fatalistic coping ( $t(78) = 4.30, p < .001$ ), family functioning ( $t(78) = 2.43, p < .05$ ), and parental adjustment ( $t(78) = 3.40, p < .001$ ). The analysis indicated that low income group ( $m = 117.44, sd = 28.83$ ) reported more stress than high income group ( $m = 150.32, sd = 27.24$ ). In terms of fatalistic coping, low income group ( $m = 29.55, sd = 3.70$ ) used more fatalistic coping than high income group ( $m = 24.81, sd = 5.08$ ). Similarly, in terms of family functioning low income group ( $m = 137.37, sd = 30.96$ ) reported more dysfunctional family pattern than high income group ( $m = 121.58, sd = 25.57$ ). Finally, in terms of parental adjustment, low income group ( $m = 74.41, sd = 52.58$ ) were less adjusted than high income group ( $m = 41.50, sd = 33.49$ ).

**Table 4***Descriptive Statistics and Mean Differences of Demographic Characteristics of Participants*

Variables	Parental Stress-reversed				Problem Solving / Optimistic Coping				Fatalistic Coping			
	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>
Child Gender			78	-2.09*			78	-.40			78	.76
Female	132.31 <sup>a</sup>	34.31			40.09	7.41			26.83	5.42		
Male	146.87 <sup>a</sup>	27.03			40.71	6.11			25.94	4.89		
Parent Gender			78	-2.00*			78	-.99			78	.65
Female	134.66 <sup>a</sup>	32.75			39.89	7.11			26.66	5.56		
Male	149.87 <sup>a</sup>	26.88			41.54	5.93			25.83	4.12		
Education			78	-1.24			78	.008			78	2.92**
Low	135.92	33.44			40.39	6.97			27.63 <sup>a</sup>	4.97		
High	145.03	28.07			40.38	6.56			24.27 <sup>a</sup>	4.85		
Income Level			78	-5.01***			78	-1.20			78	4.30***
Low	117.44 <sup>a</sup>	28.83			39.11	7.26			29.55 <sup>a</sup>	3.70		
High	150.32 <sup>a</sup>	27.23			41.03	6.51			24.81 <sup>a</sup>	5.08		

Note 1. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Note 2. The mean scores that share a common letter superscript on each column are significantly different from each other at least at  $p < .05$ , using Tukey's post hoc criterion for significance

**Table 4 (cont.)**

Variables	SSS / Helplessness / Self Blame Coping				Family Functioning				Parental Adjustment			
	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>
Child Gender			78	-.64			78	.81			78	1.38
Female	18.21	2.88			129.36	31.54			58.98	47.48		
Male	18.66	3.29			124.21	24.42			45.58	38.06		
Parent Gender			78	-1.18			78	2.31*			78	1.40
Female	18.16	3.36			131.57 <sup>a</sup>	29.68			57.03	42.55		
Male	19.04	2.20			116.04 <sup>a</sup>	21.76			42.29	30.64		
Education			78	-.20			78	1.93*			78	1.18
Low	18.37	3.25			131.45 <sup>a</sup>	28.68			56.92	50.26		
High	18.52	2.77			118.93 <sup>a</sup>	26.28			45.03	27.16		
Income Level			78	1.12			78	2.43*			78	3.40***
Low	18.96	3.15			137.37 <sup>a</sup>	30.96			74.41 <sup>a</sup>	52.58		
High	18.15	3.02			121.58 <sup>a</sup>	25.57			41.51 <sup>a</sup>	33.49		

Note 1. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Note 2. The mean scores that share a common letter superscript on each column are significantly different from each other at least at  $p < .05$ , using Tukey's post hoc criterion for significance

**Table 4 (cont.)**

Variables	Child Self Concept				Child Positive Coping				Child Negative Coping			
	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>
Child Gender			78	-.09			78	1.16			78	1.75
Female	41.09	14.33			19.65	2.85			10.59	2.26		
Male	41.39	14.29			18.89	2.97			11.45	2.06		
Parent Gender			78	1.20			78	.85			78	-.22
Female	42.48	14.33			19.31	2.64			10.96	2.23		
Male	38.33	13.81			19.25	3.53			11.08	2.16		
Education			78	-.03			78	-2.55*			78	-4.63***
Low	41.19	13.34			18.69 <sup>a</sup>	3.02			10.23 <sup>a</sup>	2.11		
High	41.31	15.90			20.36 <sup>a</sup>	2.40			12.34 <sup>a</sup>	1.65		
Income Level			78	-1.71			78	1.06			78	-.64
Low	37.48	12.62			19.78	2.21			10.78	1.72		
High	43.15	14.71			19.04	3.20			11.11	2.41		

Note 1. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Note 2. The mean scores that share a common letter superscript on each column are significantly different from each other at least at  $p < .05$ , using Tukey's post hoc criterion for significance

**Table 4 (cont.)**

Variables	Child Adjustment			
	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>
Child Gender			78	-1.48
Female	17.93	10.03		
Male	21.53	11.72		
Parent Gender			78	.27
Female	19.86	11.67		
Male	19.12	9.27		
Education			78	-1.16
Low	19.49	11.97		
High	19.90	9.08		
Income Level			78	1.41
Low	22.04	11.14		
High	18.41	10.75		

Note 1. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Note 2. The mean scores that share a common letter superscript on each column are significantly different from each other at least at  $p < .05$ , using Tukey's post hoc criterion for significance

### 3.4 Correlations

The zero order correlation coefficients among the continuous variables were examined in order to investigate the relationship among variables of the current study (See Table 5). According to the analysis, parent age was positively correlated with child negative coping ( $r = .22, p < .05$ ). In other words, the higher the age of the parent, the more the child used negative coping strategies. Number of child was positively correlated with fatalistic coping ( $r = .38, p < .01$ ), family functioning ( $r = .24, p < .05$ ), and child adjustment ( $r = .39, p < .01$ ); and was negatively correlated with parental stress-reversed ( $r = -.25, p < .05$ ), and child positive coping ( $r = .32, p < .01$ ). That is, as the number of children increased, parents used more fatalistic coping, had more dysfunctional family patterns, and had more adjustment problems. Moreover, as the number of children increased, parents experienced more stress and the children used less positive coping methods. Parental stress-reversed was positively correlated with problem solving/optimistic coping ( $r = .50, p < .01$ ) and child self concept ( $r = .22, p < .01$ ); and was negatively correlated with fatalistic coping ( $r = -.39, p < .01$ ), family functioning ( $r = -.61, p < .01$ ), parental adjustment ( $r = -.60, p < .01$ ) and child adjustment ( $r = -.46, p < .01$ ). In other words, parents who had less stress used more problem solving/optimistic coping and their children's had high self concept. Also, parents who had more stress, used more fatalistic coping, had dysfunctional family pattern, and had more parental and child adjustment problems. Problem

solving coping was negatively correlated with fatalistic coping ( $r = -.28, p < .05$ ), seeking social support/helplessness/self blame coping ( $r = -.34, p < .01$ ), family functioning ( $r = -.65, p < .01$ ), and parental adjustment ( $r = -.38, p < .01$ ). Parents, who used problem solving more, had functional family pattern and had less adjustment problems. While, fatalistic coping was negatively correlated with child self concept ( $r = -.27, p < .05$ ), it was positively correlated with seeking social support/helplessness/ self blame coping ( $r = .40, p < .01$ ), family functioning ( $r = .49, p < .01$ ), parental adjustment ( $r = .36, p < .01$ ), and child adjustment ( $r = .36, p < .01$ ). In other words, the child of the parents who used fatalistic coping more had less self concept, more dysfunctional family pattern, and had more both parental and child adjustment problems. Seeking social support/helplessness/self blaming coping was positively correlated with family functioning ( $r = .49, p < .01$ ) and parental adjustment ( $r = .51, p < .01$ ). That is, parents who used more seeking social support/helplessness/self blaming coping had dysfunctional family pattern and adjustment problems. Moreover, family functioning was positively correlated with parent adjustment ( $r = .66, p < .01$ ) and child adjustment ( $r = .28, p < .05$ ). In other words, parents and their children with dysfunctional family pattern had more adjustment problems. Finally, although child adjustment was positively correlated with parental adjustment ( $r = .42, p < .01$ ), it was negatively correlated with child self concept ( $r = -.36, p < .01$ ). That is, positively adjusted children had better self concept, and also their parents had less adjustment problems.

**Table 5***Descriptives for and Intercorrelations among Continuous Variables*

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	<i>M</i>	<i>SD</i>	Range	
																Min	Max
1. Child Age	---													10.15	2.22	6	16
2. Parent Age	.22	---												39.64	6.14	22	52
3. Number of Child	.08	.20	---											2.70	1.07	1	6
4. Parental Stress-Reversed	.09	.02	-.25*	(.95)										139.22	31.73	80	208
5. Problem Solving/Optimistic C	.14	-.05	.09	.50**	(.89)									40.39	6.79	21	51
6. Fatalistic Coping	-.08	.00	.38**	-.39**	-.28*	(.86)								26.41	5.16	15	36
7. SSS/Helplessness /Self Blaming C	.03	.11	-.01	-.17	-.34**	.40**	(.63)							18.42	3.07	12	24
8. Family Functioning	-.18	-.00	.24*	-.61**	-.65**	.49**	.49**	(.93)						126.91	28.32	77	198
9. Parental Adjustment	-.00	.07	.14	-.60**	-.38**	.36**	.51**	.66**	(.98)					52.61	43.51	0	197
10. Child Self Concept	.12	.13	-.21	.22**	.02	-.27*	-.12	-.19	-.20	(.91)				41.24	14.22	9	73
11. Child Positive Coping	.01	.04	-.32**	.16	.04	-.15	.03	-.22	.01	-.04	(.71)			19.29	2.91	5	15
12. Child Negative Coping	.10	.22*	-.11	.05	-.07	-.04	.05	-.15	.07	.08	.03	(.53)		11.00	2.20	11	24
13. Child Adjustment	-.12	.12	.39**	-.46**	-.07	.36**	.19	.28*	.42**	-.36**	-.21	.18	(.89)	19.64	10.95	2	44

Note 1. \*  $p < .05$ , \*\*  $p < .01$

Note 2. Scores shown in parentheses show alpha internal consistency reliabilities

### 3.5 Predictors of Child Adjustment

A hierarchical regression analysis was computed to predict child adjustment with parental stress, problem solving/optimistic coping, fatalistic coping, seeking social support/helplessness/self blame coping, family functioning, parental adjustment, child self concept, and child positive/negative coping after controlling for the effect of child gender and parent education in the first step . The explained variance of the first step was not significant ( $R^2 = .04$ ,  $F(2, 77) = 1.40$ ,  $p > .05$ ). In the second step, with the addition of all parental variables (i.e. stress-reversed, parental problem solving/optimistic coping, parental fatalistic coping, parental seeking social support/helplessness/self-blame coping, family functioning, and parental adjustment),  $R^2$  resulted in a significant increment and explained 44% of the variance ( $R^2 = .47$ ,  $\Delta F(6, 71) = 9.79$ ,  $p < .001$ ). After controlling for the effect of child gender and parent education; parental stress-reversed ( $\beta = -.51$ ,  $p < .001$ ) and parental problem solving/optimistic coping ( $\beta = -.34$ ,  $p < .01$ ) predicted child adjustment negatively, while parental fatalistic coping ( $\beta = .36$ ,  $p < .01$ ) predicted child adjustment positively. Thus, as the parental stress and the parental use of fatalistic coping increased, the child adjustment problems increased, as well. Moreover, as the parental use of problem solving/optimistic coping strategies increased, the child adjustment problems decreased. In the third step child-related variables (i.e. child self concept, child positive coping and child negative coping) were added to the regression equation and this

addition did not result in a significant increment in the explained variance ( $R^2 = .53, \Delta F(3, 68) = 2.54, p > .05$ ). Although explained variance of the third step was not significant, child self concept ( $\beta = -.19, p < .05$ ) significantly predicted child adjustment. That is, as the children had better self concepts, their adjustment problems decreased.

**Table 6**

*Hierarchical Regression Model Predicting Cerebral Palsied Children's Adjustment from Demographic Variables (Child Gender, Parent Education), Parental Variables (Parental Stress, Problem Solving/Optimistic Coping, Fatalistic Coping, Seeking Social Support (SSS)/Helplessness/Self-Blame Coping, Family Functioning, Parental Adjustment) and Child-Related Variables (Child Self-Concept, Child Positive Coping, Child Negative Coping)*

Variables	B	SE B	$\beta$	$\Delta R^2$	$\Delta F$	df
Step 1						
Child Gender	3.86	2.46	.18	.04	1.40 <sup>ns</sup>	(2,77)
Parent Education	-.80	1.02	-.09			
Step 2						
Parental Stress-reversed	-.18	.05	-.51 <sup>***</sup>			
Problem Solving / Optimistic C.	.55	.20	-.34 <sup>**</sup>			
Fatalistic Coping	.77	.25	.36 <sup>**</sup>	.44	9.79 <sup>***</sup>	(6,71)
Helplessness/SSS Coping	-.31	.42	-.09			
Family Functioning	-.01	.06	-.02			
Parental Adjustment	.07	.03	.27			
Step 3						
Child Self Concept	-.15	.07	-.19 <sup>*</sup>	.05	2.54 <sup>ns</sup>	(3,68)
Child Positive Coping	-.63	.36	-.17			
Child Negative Coping	.45	.51	.09			

Note. <sup>\*</sup>  $p < .05$ ; <sup>\*\*</sup>  $p < .01$

## **CHAPTER IV**

### **DISCUSSION**

#### *4.1 Overview*

Chronic diseases, such as CP causes psychological distress for patients and their families. The main objective of the present study was to examine children's adjustment to CP. Adjustment was conceptualized as lack of psychological distress. The main aim of the present study was to investigate variables related to psychological adjustment of children with CP, more specifically, relationship of sociodemographic variables, parental stress, family functioning, parental adjustment, parent's coping methods, child's coping methods, and child self concept with child adjustment was studied by using transactional stress and coping model (Thompson et al., 1992) as a guiding framework.

In this section the results of the current study will be discussed. First, the findings of the comparisons made among different levels of demographic variables in terms of the continuous variables will be discussed. Second, the predictors of child adjustment will be discussed. And finally, limitations of the study, clinical implications of the findings, and suggestions for future research will be presented.

## *4.2 Results of the Study*

### *4.2.1 The Comparison of Participants Belonging to Different Levels of Demographic Variables in Terms of the Continuous Variables of the Present Study*

Participants belonging to different levels of demographic variables (i.e. child gender, parent gender, education of parent, income level) were compared in terms of the continuous variables (parental stress, problem solving / optimistic coping, fatalistic coping, seeking social support and helplessness coping, family functioning, parental adjustment, child self concept, child positive / negative coping, child adjustment).

Gender of parents was one of the demographic variables used in the study. It was found that mothers reported more stress than fathers. Previous studies, comparing the distress levels of mothers and fathers with chronically ill children, have found similar results to the current study, namely mothers of children with chronic illness experience more psychological stress and adjustment problems (Harrison & Sofronoff, 2002; Yıldız, Celebioglu & Olgun, 2009; Sen & Yurtsever, 2007). In this study, parental stress was measured with caregiver well being scale and the scale measures the daily activities, needs, deficiencies and strengths of the caregiver. Thus, higher scores on this scale indicated less distress among parents. About 59% of the mothers in the current study were housewives. These female caregivers have to spend their most of time with their children, because -as it was mentioned in introduction part- children with spastic cerebral

palsy have problems with their muscle control and balance and they always need their caregivers. Therefore, while dealing with house works and doing things for their children, they couldn't spare time for their own needs. While, filling the well being scale, in items like "learning new skills" or "to participate in social activities" some of mothers said that "we have no chance to do this because we have to live with our children like conjoined twins". For this reason, mothers received lower scores in this scale.

Gender of children was another demographic variable in the study. It was proposed that there may be a difference between female children and male children in terms of continuous variables of the study. However, except from the parental stress, there was no significant differences obtained. Although in literature no significant difference was found between genders of chronically ill children in terms of parental stress, parental coping, parental adjustment, and family functioning (Yıldız, Celebioglu, & Olgun, 2009; Wang & Jong, 2004), there is a significant difference in terms of child self concept, child coping methods, and child adjustment (Shields, Loy, Murdoch, Taylor, & Dodd, 2007; Eshenbeck, Kohlman, & Lohaus, 2004; Thompson & Gustafson, 1996). Different from the literature, parents of female and male children received significantly different scores from parental stress measure. It was found that parents of female children experienced more stress. A possible explanation for this is that the caregivers of the female children are mostly their mothers and male children's caregivers are their fathers. And since mothers' stress was significantly higher than fathers, parents with female children experienced more stress.

Level of education was another demographic variable that was examined in relation to continuous variables. Parents in low educated group had the highest scores in fatalistic coping, and family functioning. Conversely, children of high educated parents had the highest scores in negative coping and positive coping. According to Lazarus' (1990) theoretical framework during appraisal process, persons first evaluate the harmfulness of the situation and then they evaluate the coping resources. During this evaluation process, high education may be a resource factor that makes individuals to evaluate situations as less stressful. In terms of coping methods, the results of the present study showed that parents in low educated group use significantly more fatalistic coping. This may be because of more frequent use of religious beliefs while dealing with their children due to the insufficient resources. Parallel to this finding of the present study, Hashemi, Razavil, Sharif and Shahriari (2007) revealed that as parents' education levels decrease, their spiritual beliefs help them to cope while caring for a child with a chronic illness. The other finding was about the relation of parents' education level and child coping methods. Interestingly, the results showed that children of highly educated parents used more negative coping as compared to children of less educated parents. This may due to parents behaviors. Because highly educated parents use problemsolving coping more (Nijboer, Tempelaar, Trilemstra, Bos & Sanderman, 2001), they may undertake the control of the illness related problems. Thus, the children of highly educated parents may face with problems less than the children of uneducated parents. And this situation may lead children use more negative coping.

There were several significant differences among different income groups in terms of the continuous variables of the study. For parents, parental stress, fatalistic coping, family functioning and parental adjustment were different among income groups. Parents in low income group experienced more stress than the high income group. Moreover, parents in low income group had more adjustment problems than high income group. This may be due to lack of resources that causes additional problems. That is, living with cerebral palsy is very expensive; these children need equipments to walk, to write, and also some of the children need equipments to speak. Therefore, families in low income group may have additional stress while providing the needs of children. Additionally, in a metaanalysis, Pinquart and Sorensen (2007) proposed that low income level was a predictor of worse physical health. Consequently, family income was an important factor influencing the stress level and psychological/physical health outcomes. In terms of fatalistic coping methods, low income groups significantly differed from high income groups. That is, parents in low income group cope with their problems by using fatalistic methods. According to the cognitive theory of coping, problem focused coping is more commonly used when the situation is seen as more controllable, and emotion focused coping is more frequently used when the situation is appraised as uncontrollable and unchangeable (Folkman, 1984). As it was mentioned in introduction part, cerebral palsy is a lifelong disorder and unchangeable but controllable. Due to their restricted resources, parents in low income group may interpret the situation as uncontrollable. In this uncontrollable and unchangeable situation fatalistic beliefs may help them to cope. Similarly, the

results of the current study revealed that like their parents, the child of low income group uses more negative coping when confronted with a stressful situation.

#### *4.2.2 Predictors of Child Adjustment*

The effects of the independent variables (parental stress, problem solving/optimistic coping, fatalistic coping, seeking social support and helplessness coping, family functioning, parental adjustment, child self concept, and child positive/negative coping) on child adjustment were investigated, by controlling for the effect of gender and education level of parents.

The result of regression analysis revealed that parental stress and parents' coping strategies (problem solving/optimistic coping, and fatalistic coping) were significant predictors of child adjustment. None of the socio-demographic variables appeared to be significantly associated with child adjustment. However, many studies showed the effects of gender on child adjustment (Shields, Loy, Murdoch, Taylor, & Dodd, 2007; Thompson & Gustafson, 1996). Contrary to the present study, Shields et al. (2007) study yielded that male children with CP show more adjustment problems than female children. Our insignificant finding may be explained by the insufficient number of participants.

As expected, the regression analysis showed that children, whose parents experience more stress, show more adjustment problems. In other words, parental stress leads to adjustment problems in children with CP. This finding was in line with previous studies (Quine & Pahl, 1991; Deborah & Susan, 2007; Oana & Catrinel, 2009) showing that increment in the stress levels of mothers of children

with chronic disorder leads to increment in maladaptive behaviors of children. Moreover, a study done with cerebral palsied children supported the importance of stress level of parents in adjustment of children (Glenn, Cunningham, Poole, Reeves, & Weindling, 2008). Another explanation for the positive relationship between the impacts of parental stress on child adjustment can also be explained from the perspective of transactional stress and coping model (Thompson & Gustafson, 1996), which proposed primacy of parental stress appraisal in child adjustment.

The prediction based on transactional stress and coping theory (Thompson & Gustafson, 1996) about the relationship of coping methods with child adjustment, was also supported. Problem solving/optimistic coping of parents, as predicted, was found to be related to child adjustment. The child of the parents, who use problem solving/optimistic coping, had less adjustment problems. And also, the children of parents using fatalistic coping had more adjustment problems. This finding was consistent with the results of previous research in the literature, which reported that coping methods of parents was related to the adjustment of children with chronic illnesses (Madden, Hastings, & Hoff, 2002; Friedman et al. 2004; Hough, Brumitt, Templin, Saltz, & Mood, 2003). In present study, this finding may be the result of the parental stress and fatalistic coping interaction. That is, as it was mentioned in result chapter, parental stress and fatalistic coping was positively correlated with each other and also parental stress was a significant predictor of child adjustment. Although regression analyses do not give any information about cause-effect relations,

previous studies conducted with structural equation modeling showed that fatalistic and emotion focused coping of caregivers affect their emotional distress and this was a direct predictor of child's adjustment problems (Hough, Brumitt, Templin, Saltz, & Mood, 2003).

Although it was proposed that better parental adjustment and functional family pattern would be predictors of better adjustment in children with CP, the regression analysis revealed that parental adjustment and family functioning were not significant predictors of child adjustment. Contrary to these results, the literature showed that parent adjustment and family functioning are important factors in child adjustment (Skok, Harvey, & Reddihough, 2006; Dewey & Crawford, 2007; Thompson et al. 1999, Davis et al. 1998). This may be due to the illness related factors. As it was mentioned above, living with cerebral palsy may cause social, psychological, and physical problems in children. In order to protect their children from extra stress, they may not make them feel their adjustment problems.

Similar to parental adjustment, the analysis revealed that child related variables such as coping methods and self esteem were not significant in predicting child adjustment. Although correlation analysis yielded that children with higher self esteem have better adjustment, hierarchical regression analysis revealed that self esteem was not a predictor of child adjustment. In regression analysis, child self esteem was in the third step and although the explained variance of that step was not significant, child self concept significantly predicted child adjustment. The insignificance of the child self esteem and coping methods

might be associated with the large portion of the explained variance by the second step.

In conclusion, having a chronic illness is a risk factor for developing adjustment problems in children (Parkes & McCusker, 2008). In the present study the factors that are related with the adjustment were examined. Although it is hypothesized that less parental stress, high usage of problem solving coping, better parental adjustment, higher self esteem and child's adaptive coping methods predict better adjustment in children with cerebral palsy, the results revealed that only less parental stress, and high usage of problem solving coping predict better adjustment.

#### *4.3 Limitations of the Present Study*

Although the findings of the present study contribute to the existing literature, the study has several limitations.

One of the most important limitations of the current study is its cross-sectional nature. However, in order to examine the exact relationships among the variables longitudinal design was necessary. But, due to practical difficulties this was not achieved. Therefore, the results need to be interpreted.

Moreover, small numbers of participants were used in the study. Because the number of participants was restricted, regression analysis was conducted. However, using structural equation modeling might be a more appropriate technique to be able to talk about causation and test the Transactional Stress and Coping model exactly.

The other limitation is the representativeness of the study. The participants of the study were selected from only one hospital (a state hospital). This may lead to problems in representativeness of this sample for other spastic CP patients. The present sample was composed of CP patients not showing great variation in regards to gender, income, marital status, education level, and employment status. This homogeneity may have hindered the investigation of the effects of these variables on continuous variables. These variables, namely, gender, income, education level, and marital status may all have an important impact on CP patients' adjustment. Therefore, the selection of the sample from only one hospital brings about generalizability problems of the present findings to CP patients from other socioeconomic groups.

Another limitation is that, parental stress was measured by only caregiver well being scale. However, besides the caregiver wellbeing scale, a scale which measures the illness related stress could be used. Because caregiver well being scale measures only daily life stressors and stress due to not being able to provide basic needs, we could not get any information about illness related stress. Therefore, alternative measurement tools that examine this variable in detail should be used in further studies.

Other limitation of the study was that the analyses of the McMaster Family Assessment scale were done with the whole scale scores. Although, the scale had seven subscales, which are problem solving, communication, roles, affective responsiveness, affective involvement, behavior control, and general functions,

due to practical reasons the whole scale scores were used. Consequently, possible predictors of child adjustment in terms of family functioning could not be found.

Finally, the present study used transactional stress and coping model as the theoretical framework. According to the model, as mentioned in introduction chapter, both parents' and children's health locus of control, self esteem, and illness related factors are predictors of adjustment (Thompson & Gustafson, 1996). However, in current study due to the practical reasons these predictors were not added to the analysis.

#### *4.4 Implications of the Present Study*

This study is the first study that examines the adjustment processes of cerebral palsied children in Turkey. Thus, it can provide valuable guidelines for psychological support services for children with CP.

Cerebral palsy cannot be cured, but resilience can be promoted by coping with functional and physical challenges (Parkes & McCusker, 2008). Previous studies showed that in coping with challenges and preventing adjustment problems of children with CP, parental coping methods, stress, positive adjustment, and child positive coping have direct effects. Based on our findings, interventions with families of a child with CP should be effective in adjustment problems. These interventions should focus on the parental stress and their coping strategies. Specifically, intervention programs should target to improve parent's coping methods in the direction of problem solving coping. Moreover, cognitive behavioral therapy or psychoeducation might be highly effective in treating

children with chronic illness. For instance, it is found that in a cognitive behavioral treatment cognitive restructuring, behavioral techniques, relaxation, and other elements leads significant improvements in parental reports of internalizing behaviors of chronically ill children (Rosenberg, 2005).

#### *4.5 Directions for Future Studies*

In the present study only parental stress, parent and child coping methods, family functioning, parental adjustment, and child self concept were examined as predictors of child adjustment. Future studies should include health locus of control and self esteem as predictors of child adjustment, too.

The current study did not take into account the illness related stress. The future studies should use illness related stress measures.

Additionally, the present study can be replicated with different comparison groups such as with other chronic diseases. Comparison groups may provide normative data to compare the results of psychological adjustment of children with CP.

Finally, longitudinal studies are needed to investigate the exact relationships among variables that were examined in the current study.

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## APPENDICES

### APPENDIX A: Demographic Information Form

Çocuğun adı ve soyadı:
Cinsiyeti: Kız __ Erkek __
Doğum tarihi: Gün _____ Ay _____ Yıl _____
Kaçıncı sınıfa gidiyor _____
Formun doldurulduğu tarih: Gün _____ Ay _____ Yıl _____
Formu dolduran kişinin çocuğa yakınlık derecesi :
Anne _____ öz _____ üvey _____
Baba _____ öz _____ üvey _____
Diğer _____

- **Cinsiyetiniz:**  Kadın  Erkek
- **Yaşınız:** \_\_\_\_\_
- **Eğitim durumunuz nedir?**  Okuma – yazma yok  Okur - Yazar  
 İlkokul mezunu  Orta Okul Mezunu  
 Lise Mezunu  Üniversite ve üstü
- **Şu anki evlilik durumunu:**  Evli  Boşanmış  Dul(eşi vefat etmiş)
- **Toplam kaç çocuğunuz var?** \_\_\_\_\_
- **Mesleğiniz:**
- **Şu anda yaptığınız iş:**
- **Yaşamınızın en uzun süresini geçirdiğiniz yer neresidir?**

Büyük şehir (Ankara, İstanbul, İzmir, vb)  Şehir  İlçe  Köy

- **Aylık eve giren para miktarı ne kadardır?**  
 Düşük (1 milyardan az)  
 Orta(1milyar – 2 milyar arası)  
 Yüksek(2 milyar ve üstü)

- **Aşağıdaki tabloda serebral palsisi olan çocuğunuzun (birden fazlaysa çocuklarınızın) cinsiyetini ve yaşını belirtiniz.**

1. Çocuk: Cinsiyeti: \_\_\_ Kız \_\_\_ Erkek Yaşı:

2. Çocuk: Cinsiyeti: \_\_\_ Kız \_\_\_ Erkek Yaşı:

- **Herhangi bir fiziksel rahatsızlığınız var mı?**  Var  Yok

Var ise adını belirtiniz: \_\_\_\_\_

- **Herhangi bir psikolojik rahatsızlığınız var mı?** Var \_ Yok \_

- **Bu formu doldurduğunuzda çocuğunuzun doğum sırası nedir?**

İlk Çocuk  Ortanca veya ortancalardan biri  Son çocuk

- **Bu formu doldurduğunuz çocuğunuz bugüne kadar hiç davranış veya uyum sorunları nedeniyle bir kliniğe veya hastaneye yönlendirildi mi?**

Evet  Hayır

Cevabınız evet ise lütfen nedenini belirtiniz \_\_\_\_\_

## APPENDIX B: McMaster Family Assessment Device

Aşağıda aileler hakkında 60 cümle bulunmaktadır. Lütfen her cümleyi dikkatlice okuduktan sonra sizin ailenize ne derece uyduğuna karar veriniz. Önemli olan sizin ailenizi nasıl gördüğünüzdür.

Her cümle için dört seçenek söz konusudur.

Aynen Katılıyorum Eğer cümle sizin ailenize tamamen uyuyorsa işaretleyiniz  
Büyük Ölçüde Katılıyorum Eğer cümle sizin ailenize çoğunlukla uyuyorsa işaretleyiniz  
Biraz Katılıyorum Eğer cümle sizin ailenize çoğunlukla uymuyorsa işaretleyiniz  
Hiç Katılmıyorum Eğer cümle sizin ailenize hiç uymuyorsa işaretleyiniz.

Her cümlelerin yanında 4 seçenek içinde ayrı yerler ayrılmıştır. Size uyan seçeneğe (X) işareti koyunuz. Her cümle için uzun uzun düşünmeyiniz. Mümkün olduğu kadar çabuk ve samimi cevaplar veriniz. Kararsızlığa düşerseniz, ilk aklınıza gelen doğrultusunda hareket ediniz. Lütfen her cümleyi cevaplandırıdığınızdan emin olunuz.

	Cümleler	Aynen Katılıyorum	Büyük Ölçüde Katılıyorum	Biraz Katılıyorum	Hiç Katılmıyorum
1	Ailece ev dışında program yapmakta zorlanırsınız çünkü aramızda fikir birliği sağlayamayız.				
2	Günlük hayatımızdaki sorunları (problemlerin) hemen hepsini aile içinde hallederiz.				
3	Evde biri üzgün ise diğer aile üyeleri bunun nedenini bilir.				
4	Bizim evde kişiler kendilerine verilen her görevi düzenli bir şekilde yerine getirmezler.				

	Cümleler	Aynen Katılıyorum	Büyük Ölçüde Katılıyorum	Biraz Katılıyorum	Hiç Katılmıyorum
5	Evde birinin başı derde girdiğinde diğerleri de bunu fazlasıyla dert ederler.				
6	Bir sıkıntı ve üzüntü ile karşılaştığımızda birbirimize destek oluruz.				
7	Ailemizde acil bir durum olsa şaşırıp kalırız.				
8	Bazen evde ihtiyacımız olan şeylerin bittiğinin farkına varmayız.				
9	Birbirimize karşı olan sevgi, şefkat gibi duygularımızı açığa vurmaktan kaçınırız.				
10	Gerektiğinde aile üyelerine görevlerini hatırlatır kendilerine düşen işi yapmalarını sağlarız.				
11	Evde dertlerimizi, üzüntülerimizi birbirimize söylemeyiz.				
12	Sorunlarımızın çözümlerinde genellikle ailece aldığımız kararları uygularız.				
13	Bizim evdekiler ancak onların hoşuna giden bir şey söylediğinizde sizi dinlerler.				
14	Bizim evde bir kişinin söylediklerinden ne hissettiğini anlamak pek kolay değildir.				
15	Ailemizde eşit bir görev dağılımı yoktur.				

	Cümleler	Aynen Katılıyorum	Büyük Ölçüde Katılıyorum	Biraz Katılıyorum	Hiç Katılmıyorum
16	Ailemizin üyeleri birbirine hoşgörülü davranırlar.				
17	Evde herkes başına buyruktur.				
18	Bizim evde herkes söylemek istediklerini üstü kapalı değil de doğrudan birbirinin yüzüne söyler				
19	Ailede bazılarımız duygularımızı belli etmeyiz.				
20	Acil bir durumda ne yapacağımızı biliriz.				
21	Ailecek korkularımızı ve endişelerimizi birbirimizle paylaşmaktan kaçınırız				
22	Sevgi, şefkat gibi olumlu duygularımızı birbirimize belli etmekte güçlük çekeriz				
23	Gelirimiz (maaş) ihtiyaçlarımızı karşılamaya yetmiyor.				
24	Ailemiz bir problem çözdükten sonra bu çözümün işe yarayıp yaramadığını tartışır.				
25	Bizim ailede herkes kendini düşünür.				
26	Duygularımızı birbirimize açıkça söyleyebiliriz.				
27	Evimizde banyo / tuvalet bir türlü temiz durmaz.				
28	Aile içinde birbirimize sevgi göstermeyiz.				
29	Evde herkes bir istediğini				

	Cümleler	Aynen Katılıyorum	Büyük Ölçüde Katılıyorum	Biraz Katılıyorum	Hiç Katılmıyorum
	birbirinin yüzüne söyleyebilir.				
30	Ailemizde her birimizin belirli görev ve sorumlulukları vardır.				
31	Aile içinde genellikle birbirimizle pekiyi geçinmeyiz.				
32	Ailemizde sert-kötü davranışlar ancak belli durumlarda gösterilir.				
33	Ancak hepimizi ilgilendiren bir durum olduğu zaman birbirimizin işine karışırız.				
34	Aile içinde birbirimizle ilgilenmeye pek zaman bulamıyoruz.				
35	Evde genellikle söylediklerimizle söylemek istediklerimiz birbirinden farklıdır.				
36	Aile içinde birbirimize hoşgörülü davranırız.				
37	Evde birbirimize ancak sonunda kişisel bir yarar sağlayacaksa ilgi gösteririz.				
38	Ailemizde bir dert varsa kendi içimizde hallederiz.				
39	Ailemizde sevgi şefkat gibi güzel duygular ikinci plandadır.				
40	Ev işlerinin kimler tarafından yapılacağını hep birlikte konuşarak kararlaştırırız.				

	Cümleler	Aynen Katılıyorum	Büyük Ölçüde Katılıyorum	Biraz Katılıyorum	Hiç Katılmıyorum
41	Ailemizde herhangi bir şeye karar vermek her zaman sorun olur.				
42	Bizim evdekiler sadece bir çıkarları olduğu zaman birbirlerine ilgi gösterirler.				
43	Evde birbirimize karşı açık sözlüydür.				
44	Ailemizde hiçbir kural yoktur.				
45	Evde birinin bir şey yapması istendiğinde mutlaka takip edilmesi ve kendine hatırlatılması gerekir.				
46	Aile içinde herhangi bir sorunun (problemin)nasıl çözüleceği hakkında kolayca karar verebiliriz.				
47	Evde kurallara uyulmadığı zaman ne olacağını bilmeyiz				
48	Bizim evde aklımıza gelen her şey olabilir.				
49	Sevgi, şefkat gibi olumlu duygularımızı birbirimize ifade edebiliriz.				
50	Ailede her türlü problemin üstesinden gelebiliriz.				
51	Evde birbirimizle pek iyi geçinemeyiz.				
52	Sinirlenince birbirimize küseriz.				
53	Ailede bize verilen görevler pek hoşumuza gitmez çünkü genellikle umduğumuz				

	Cümleler	Aynen Katılıyorum	Büyük Ölçüde Katılıyorum	Biraz Katılıyorum	Hiç Katılmıyorum
	görevler verilmez.				
54	Kötü bir niyetle olmasa da evde birbirimizin hayatına çok karışıyoruz.				
55	Ailemizde kişiler her hangi bir tehlike karşısında (yangın, kaza gibi) ne yapacaklarını bilirler çünkü böyle durumlarda ne yapılacağı aramızda konuşulmuş ve belirlenmiştir.				
56	Aile içinde birbirimize güveniriz.				
57	Ağlamak istediğimizde birbirimizden çekinmeden rahatlıkla ağlayabiliriz.				
58	İşimize (okulumuza) yetişmekte güçlük çekiyoruz.				
59	Aile içinde birisi hoşlanmadığımız bir şey yaptığında ona bunu açıkça söyleriz.				
60	Problemlerimizi çözmek için ailecek çeşitli yollar bulmaya çalışırız.				

## APPENDIX C: Ways of Coping Inventory

Aşağıda insanların sıkıntılarını gidermek için kullanabilecekleri bazı yollar belirtilmektedir. Cümlelerin her birini dikkatlice okuduktan sonra, kendi sıkıntılarınızı düşünerek, bu yolları hiç kullanmıyorsanız **hiçbir zaman**, yani **1'i**, kimi zaman kullanıyorsanız **bazen**, yani **2'yi**, çok sık kullanıyorsanız **her zaman**, yani **3** seçeneğini işaretleyiniz. Katkılarınız için teşekkür ederiz.

	Hiçbir Zaman	Bazen	Her Zaman
1. Aklımı kurcalayan şeylerden kurtulmak için değişik işlerle uğraşırım.	1	2	3
2. Bir mucize olmasını beklerim.	1	2	3
3. İyimser olmaya çalışırım.	1	2	3
4. Çevremdeki insanlardan sorunlarımı çözmemde bana yardımcı olmalarını beklerim.	1	2	3
5. Bazı şeyleri büyütmeyp üzerinde durmamaya çalışırım.	1	2	3
6. Sakin kafayla düşünmeye ve öfkelenmemeye çalışırım.	1	2	3
7. Durum değerlendirmesini yaparken en iyi kararı vermeye çalışırım.	1	2	3
8. Ne olursa olsun direnme ve mücadele etme gücünü kendimde hissedirim.	1	2	3
9. Olanları unutmaya çalışırım.	1	2	3
10. Başa gelen çekilir diye düşünürüm.	1	2	3
11. Durumun ciddiyetini anlamaya çalışırım.	1	2	3
12. Kendimi kapana sıkışmış gibi hissedirim.	1	2	3
13. Duygularımı paylaştığım kişilerin bana hak vermesini isterim.	1	2	3
14. Her işte bir hayır var diye düşünürüm.	1	2	3
15. Dua ederek Allah tan yardım dilerim.	1	2	3
16. Elimde olanla yetinmeye çalışırım.	1	2	3
17. Olanları kafama takıp sürekli düşünmekten kendimi alamam.	1	2	3
18. Sıkıntıları içimde tutmaktansa paylaşmayı tercih ederim.	1	2	3
19. Mutlaka bir çözüm yolu bulabileceğime inanıp bu yolda uğraşırım.	1	2	3

	Hiçbir Zaman	Bazen	Her Zaman
20. İş olacağına varır diye düşünürüm.	1	2	3
21. Ne yapacağıma karar vermeden önce arkadaşlarımın fikrini alırım.	1	2	3
22. Kendimde her şeye başlayacak gücü bulurum.	1	2	3
23. Olanlardan olumlu bir şey çıkarmaya çalışırım.	1	2	3
24. Bunun alın yazım olduğunu ve değişmeyeceğini düşünürüm	1	2	3
25. Sorunlarımı farklı çözüm yolu ararım.	1	2	3
26. “Olanları keşke değiştirebilseydim” diye düşünürüm.	1	2	3
27. Hayatla ilgili yeni bir bakış açısı geliştirmeye çalışırım	1	2	3
28. Sorunlarımı adım adım çözmeye çalışırdım.	1	2	3
29. Her şeyin istediğim gibi olamayacağını düşünürüm.	1	2	3
30. Dertlerimden kurtulayım diye fakir fukaraya sadaka veririm.	1	2	3
31. Ne yapacağımı planlayım ona göre davranırım.	1	2	3
32. Mücadele etmekten vazgeçerim.	1	2	3
33. Sıkıntılarımdan kendimden kaynaklandığını düşünürüm.	1	2	3
34. Olanlar karşısında “kaderim buymuş” derim.	1	2	3
35. “Keşke daha güçlü bir insan olsaydım” diye düşünürüm.	1	2	3
36. “Benim suçum ne” diye düşünürüm.	1	2	3
37. “Allahın’ın takdiri buymuş” deyip kendimi teselli etmeye çalışırım.	1	2	3
38. Temkinli olmaya ve yanlış yapmamaya çalışırım.	1	2	3
39. Çözüm için kendim bir şeyler yapmaya çalışırım.	1	2	3
40. Hep benim yüzümden oldu diye düşünürüm.	1	2	3
41. Hakkımı savunmaya çalışırım.	1	2	3
42. Bir kişi olarak olgunlaştığımı ve iyi yönde geliştiğimi hissederim.	1	2	3

## APPENDIX D: Symptom Checklist (SCL-90)

Aşağıda insanların bazen yaşadıkları belirtilerin ve yakınmaların bir listesi verilmiştir. Listedeki her maddeyi lütfen dikkatle okuyun. Daha sonra o belirtinin SİZDE BUGÜN DAHİL, SON BİR HAFTADIR NE KADAR VAROLDUĞUNU yandaki bölmeden uygun olan yerde işaretleyin. Her belirti için sadece bir yeri işaretlemeye ve hiçbir maddeyi atlamamaya özen gösterin.

Yanıtlarınızı aşağıdaki ölçeğe göre değerlendirin:

Bu belirtiler son bir haftadır sizde ne kadar var?

0. Hiç yok
1. Biraz var
2. Orta derecede var
3. Epey var
4. Çok fazla var

Bu belirtiler son bir haftadır  
sizde ne kadar var?

HİÇ

ÇOK

		0	1	2	3	4
1	İçinizdeki sinirlilik ve titreme hali	0	1	2	3	4
2	Baygınlık, baş dönmesi	0	1	2	3	4
3	Bir başka kişinin sizin düşüncelerinizi kontrol edeceği fikri	0	1	2	3	4
4	Başınıza gelen sıkıntılardan dolayı başkalarının suçlu olduğu duygusu	0	1	2	3	4
5	Olayları hatırlamada güçlük	0	1	2	3	4
6	Çok kolayca kızıp öfkelenme	0	1	2	3	4
7	Göğüs (kalp) bölgesinde ağrılar	0	1	2	3	4
8	Meydanlık (açık) yerlerden korkma duygusu	0	1	2	3	4
9	Yaşamınıza son verme düşünceleri	0	1	2	3	4
10	İnsanların çoğuna güvenilemeyeceği hissi	0	1	2	3	4
11	İştahta bozukluklar	0	1	2	3	4
12	Hiçbir nedeni olmayan ani korkular	0	1	2	3	4
13	Kontrol edemediğimiz duygu patlamaları	0	1	2	3	4
14	Başka insanlarla beraberken bile yalnızlık hissetmek	0	1	2	3	4
15	İşleri bitirme konusunda kendini engellemiş hissetmek	0	1	2	3	4

16	Yalnız hissetmek	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
17	Hüzünlü kederli hissetmek	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
18	Hiçbir şeye ilgi duymamak	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
19	Ağlamaklı hissetmek	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
20	Kolayca incinebilme, kırılma	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
21	İnsanların sizi sevmediğine, kötü davrandığına inanmak	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
22	Kendini diğerlerinden aşağı görme	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
23	Mide bozukluğu, bulantı	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
24	Diğerlerinin sizi gözlediği ya da hakkınızda konuştuğu duygusu	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
25	Uykuya dalmada güçlük	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
26	Yaptığımız şeyleri tekrar tekrar doğrumu diye kontrol etmek	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
27	Karar vermede güçlük	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
28	Otobüs, tren, metro gibi umumi vasıtalarla seyahatlerden korkmak	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
29	Nefes darlığı, nefessiz kalmak	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
30	Sıcak – soğuk basmaları	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
31	Sizi korkuttuğu için bazı eşya, yer ya da etkinliklerden uzak kalmaya çalışmak	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
32	Kafanızın “bomboş” kalması	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
33	Bedeninizin bazı bölgelerinde uyuşmalar, karıncalanmalar	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
34	Günahlarınız için cezalandırılmanız gerektiği düşüncesi	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
35	Gelecekle ilgili umutsuzluk duyguları	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
36	Konsantrasyonda (dikkati bir şey üzerinde toplama) güçlük / zorlanma	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
37	Bedeninin bazı bölgelerinde zayıflık, güçsüzlük hissi	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
38	Kendini gergin ve tedirgin hissetmek	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
39	Ölme ve ölüm üzerine düşünceler	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
40	Birini dövme, ona zarar verme, yaralama isteği	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
41	Bir şeyleri, kırma dökme isteği	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4
42	Diğerlerinin yanındayken yanlış bir şeyleri yapmamaya çalışmak	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4

43	Kalabalıklarda rahatsızlık duymak	0	1	2	3	4
44	Bir başka insana hiç yakınlık duymamak	0	1	2	3	4
45	Dehşet ve panik nöbetleri	0	1	2	3	4
46	Sık sık tartışmaya girmek	0	1	2	3	4
47	Yalnız bırakıldığında / kaldığında sinirlilik hissetmek	0	1	2	3	4
48	Başarılarınız için diğerlerinden yeterince takdir görmemek	0	1	2	3	4
49	Yerinde duramayacak kadar tedirgin hissetmek	0	1	2	3	4
50	Kendini değersiz görmek / değersizlik duyguları	0	1	2	3	4
51	Eğer izin vererseniz insanların sizi sömüreceği duygusu	0	1	2	3	4
52	Suçluluk duyguları	0	1	2	3	4
53	Aklınızda bir bozukluk olduğu fikri	0	1	2	3	4

## APPENDIX E: Caregiver Well Being Scale

Aşağıda bazı temel ihtiyaçlar sıralanmıştır. Her bir ihtiyaç için hayatınızın son 3 ayını düşünün. Bu süre içinde her bir ihtiyacın ne ölçüde karşılandığını belirtiniz. Aşağıda bulunan ölçeği kullanarak sizin için uygun sayıyı yuvarlak içine alınız.

1 hiçbir zaman 2 nadiren 3 ara sıra 4 sık sık 5 her zaman

1. Yeterli paraya sahip olmak	1	2	3	4	5
<b>2. Dengeli beslenmek</b>	1	2	3	4	5
3. Yeterince uyumak	1	2	3	4	5
<b>4. Fiziksel sağlığınıza dikkat etmek (doktora, dış hekime gitmek vs.)</b>	1	2	3	4	5
5. Kendinize vakit ayırmak	1	2	3	4	5
<b>6. Sevildiğini hissetmek</b>	1	2	3	4	5
7. Sevginizi ifade etmek	1	2	3	4	5
<b>8. Öfkedenizi ifade etmek</b>	1	2	3	4	5
9. Neşenizi ve keyfinizi ifade etmek	1	2	3	4	5
<b>10. Üzüntünüzü ifade etmek</b>	1	2	3	4	5
11. Cinsellikten keyif almak	1	2	3	4	5
<b>12. Yeni beceriler öğrenmek</b>	1	2	3	4	5
13. Kendini değerli hissetmek	1	2	3	4	5
<b>14. Başkaları tarafından takdir edildiğini hissetmek</b>	1	2	3	4	5
15. Ailenizden hoşnut olmak	1	2	3	4	5
<b>16. Kendinizden hoşnut olmak</b>	1	2	3	4	5
17. Gelecekle ilgili kendinizi güvende hissetmek	1	2	3	4	5
<b>18. Yakın arkadaşlara sahip olmak</b>	1	2	3	4	5
19. Bir eve sahip olmak	1	2	3	4	5
<b>20. Gelecekle ilgili planlar yapmak</b>	1	2	3	4	5
21. Sizi düşünen birilerinin olması	1	2	3	4	5
<b>22. Hayatınızın bir anlamı olması</b>	1	2	3	4	5

Aşağıda her birimizin yaptığı ya da birilerinin bizim için yaptığı bazı yaşamsal faaliyetler sıralanmıştır. Her bir faaliyet için yaşamınızın son 3 ayını düşünün. Bu süre içinde, her bir faaliyetin ne derecede karşılandığını düşünüyorsunuz? Aşağıda bulunan ölçeği kullanarak sizin için uygun sayıyı yuvarlak içine alınız.

1 hiçbir zaman 2 nadiren 3 ara sıra 4 sık sık 5 her zaman

1. Yiyecek satın almak	1	2	3	4	5
<b>2. Yemek hazırlamak</b>	1	2	3	4	5
3. Evi temizlemek	1	2	3	4	5
<b>4. Bahçe işleri ile ilgilenmek</b>	1	2	3	4	5
5. Evin çekip çevrilmesiyle ilgilenmek	1	2	3	4	5
<b>6. Ulaşım kolaylığına sahip olmak</b>	1	2	3	4	5
7. Kıyafet alış verişini yapmak	1	2	3	4	5
<b>8. Kıyafetleri yıkamak ve giydiklerine özen göstermek</b>	1	2	3	4	5
9. Gevşemek/ rahatlamak	1	2	3	4	5
<b>10. Egzersiz/spor yapmak</b>	1	2	3	4	5
11. Bir hobiden keyif almak	1	2	3	4	5
<b>12. Yeni bir ilgi alanı ya da hobi edinmek</b>	1	2	3	4	5
13. Sosyal etkinliklere katılmak	1	2	3	4	5
<b>14. Herhangi bir konu hakkında derinlemesine düşünmek için zaman ayırmak</b>	1	2	3	4	5
15. Manevi ve ilham verici faaliyetlere zaman ayırmak	1	2	3	4	5
<b>16. Çevredenizdeki güzelliklerinin farkına varmak</b>	1	2	3	4	5
17. Arkadaşlar ya da aileden destek istemek	1	2	3	4	5
<b>18. Arkadaşlar ya da aileden destek almak</b>	1	2	3	4	5
19. Gülmek/ kahkaha atmak	1	2	3	4	5
<b>20. Kendinize iyi davranmak veya kendinizi ödüllendirmek</b>	1	2	3	4	5
21. Kariyerinize/ işinize devam etmek	1	2	3	4	5
<b>22. Kişisel temizlik ve dış görünüşünüze zaman ayırmak</b>	1	2	3	4	5
23. Aile ya da arkadaşlarla hoşça vakit geçirmek için zaman ayırmak	1	2	3	4	5

## APPENDIX F: Hacettepe Adjustment Scale

Lütfen aşağıdaki ölçeği kullanarak değerlendirilen çocuğun, belirtilen davranışı ne sıklıkla yaptığını, uygun ifadenin altındaki kutucuğu işaretleyerek belirtiniz.

		YOK	BİRAZ	ÇOK
1	Sıkılgan, çekingen ve güvensizdir			
2	Hareketlidir, yerinde duramaz			
3	Korkaktır, ürkektir			
4	Sinirlidir, çabuk kızar			
5	Bencildir, paylaşmaz			
6	Kıskançtır			
7	Herşeye ağlar			
8	İnatçıdır, söz dinlemez			
9	Kendi başına bir şey yapmaz, yardım bekler			
10	Yalan söyler			
11	Gece korkar, yalnız yatamaz			
12	Kendisine ait olmayan şeyleri izinsiz alır			
13	Kaygılı ve kuruntuludur			
14	Yaşlılarıyla geçinemez			
15	Arkadaşsızdır, yalnız oynar			
16	Cezadan etkilenmez, uslanmaz			
17	Okula isteksiz gider			
18	Kavgacı ve saldırgandır			
19	Durgun ve içine kapanıktır			
20	Kırıcı ve zararcıdır			
21	Neşesiz ve mutsuzdur			
22	Sorumsuzdur, kendi işini yapamaz			
23	Dikkatsizdir			
24	Gereksiz titizliği vardır			
25	Kekemelik			
26	Tik			

		<b>YOK</b>	<b>BİRAZ</b>	<b>ÇOK</b>
<b>27</b>	Tırnak yeme			
<b>28</b>	Parmak emme			
<b>29</b>	Kaka kaçırma			
<b>30</b>	Yatağa işeme			
<b>31</b>	Okul başarısızlığı			
<b>32</b>	Diğer Sorunlar (Açıklayınız)			

APPENDIX G: Ways of Coping  
Inventory for Children

Aşağıda çocuk ve gençlerin sorunları (problemleri) çözmek ya da kendilerini daha iyi hissetmek için yaptığı şeylerin bir listesi vardır. Biraz önce yazdığın, ameliyatla ilgili seni üzen, korkutan şeyleri düşün. Aşağıdaki her cümleyi okuyarak, bu üzücü şeyleri (sorunları) çözmek ya da kendini daha iyi hissetmek için, o cümlede yazanları ne kadar sıklıkta yaptığını işaretle. Lütfen hiçbir soruyu boş bırakma.

		<b>Hiçbir Zaman</b>	<b>Bazen</b>	<b>Her zaman</b>
1	Sadece olanları unutmaya çalışıyorum.			
2	Olanları unutmak için televizyon seyretmek ya da oyun oynamak gibi şeyler yapıyorum.			
3	Kendi kendime kalıyorum.			
4	Olan kötü şeyler hakkında konuşmuyorum.			
5	Olayların iyi yanlarını görmeyi deniyorum.			
6	Kendimi yaşanan bu kötü olaylara neden olmakla suçluyorum.			
7	Başkalarını yaşanan bu kötü olaylara neden olmakla suçluyorum.			
8	Kötü şeylerin üstesinden gelmek için çözümler düşünüyorum.			
9	Kötü şeylerin üstesinden gelmek için bir şeyler yapıyorum ya da birileriyle konuşuyorum.			
10	Bağırıp çağırıyor, çılgına dönüyorum.			
11	Kendi kendimi sakinleştirmeye çalışıyorum.			
12	Kötü şeylerin hiç olmamış olmasını diliyorum.			
13	Olanları değiştirebilmeyi diliyorum.			
14	Ailem, büyükler ya da arkadaşarımla zaman geçirerek kendimi daha iyi hissetmeye çalışıyorum.			
15	Hiçbir şey yapmıyorum, çünkü kötü şeylerin oluşu durdurulamaz.			

## APPENDIX H: Piers – Harris Children’s

### Self – Concept Scale

Aşağıda 80 cümle var. Bunlardan sizi tanımlayanları evet, tanımlamayanları ise hayır olarak cevaplandırın. Bazı cümlelere karar vermek zor olabilir. Yine de lütfen bütün cümleleri cevaplayın. Aynı cümleyi hem evet, hem hayır şeklinde işaretlemeyin. Unutmayın, cümledeki ifade genellikle sizi anlatıyorsa evet, genellikle sizi anlatmıyorsa hayır olarak işaretleyeceksiniz.

		EVET	HAYIR
1	İyi resim çizerim		
2	Okul ödevlerimi bitirmem uzun sürer		
3	Ellerimi kullanmada becerikliyimdir		
4	Okulda başarılı bir öğrenciyim		
5	Aile içinde önemli bir yerim vardır		
6	Sınıf arkadaşlarım benimle alay ediyorlar		
7	Mutluyum		
8	Çoğunlukla neşesizim		
9	Akıllıyım		
10	Öğretmenler derse kaldırıncaya heyecanlanırım		
11	Dış (fiziki) görünüşüm beni rahatsız eder		
12	Genellikle çekingenim		
13	Arkadaş edinmekte güçlük çekiyorum		
14	Büyüdüğümde önemli, bir kimse olacağım		
15	Aileme sorun yaratırım		
16	Kuvvetli sayılırım		
17	Sınavlardan önce heyecanlanırım		
18	Okulda terbiyeli, uyumlu davranırım		
19	Herkes tarafından pek sevilen biri değilim		
20	Parlak güzel fikirlerim vardır		
21	Genellikle kendi dediklerimin olmasını isterim		
22	İstedğim bir şeyden kolayca vazgeçerim		
23	Müzikte iyiyim		
24	Hep kötü şeyler yaparım		
25	Evde çoğu zaman huysuzluk ederim		
26	Sınıfta arkadaşlarım beni sayarlar		
27	Sinirli biriyim		

		EVET	HAYIR
28	Gözlerim güzeldir		
29	Derse kalktığımda bildiklerimi sıkılmadan anlatırım		
30	Derslerde sık sık hayal kurarım		
31	(Kardeşiniz varsa) Kardeş(ler)ime sataşırım		
32	Arkadaşlarım fikirlerimi beğenir		
33	Başım sık sık belaya girer		
34	Evde büyüklerimin sözünü dinlerim		
35	Sık sık üzülürüm, meraklanırım		
36	Ailem benden çok şey bekliyor		
37	Halimden memnunum		
38	Evde ve okulda pek çok şeyin dışında bırakıldığım hissine kapılırım		
39	Saçlarım güzeldir		
40	Çoğu zaman okul faaliyetlerine gönüllü olarak katılırım		
41	Şimdiki halimden daha başka olmayı isterdim		
42	Geceleri rahat uyurum		
43	Okuldan hiç hoşlanmıyorum		
44	Arkadaşlar arasında oyunlara katılmak için bir seçim yapılırken, en son seçilenlerden biriyim		
45	Sık sık hasta olurum		
46	Başkalarına karşı iyi davranmam		
47	Okul arkadaşlarım güzel fikirlerim olduğunu söylerler		
48	Mutsuzum		
49	Çok arkadaşım var		
50	Neşeliyim		
51	Pek çok şeye aklım ermez		
52	Yakışıklıyım / güzelim		
53	Hayat dolu bir insanım		
54	Sık sık kavgaya karışırım		
55	Erkek arkadaşlarım arasında sevilirim		
56	Arkadaşlarım bana sık sık sataşırlar		
57	Ailemi düş kırıklığına uğratarım		
58	Hoş bir yüzüm var		
59	Evde hep benle uğraşırlar		
60	Oyunlarda ve sporda başı hep ben çekerim		
61	Ne zaman bir şey yapmaya kalksam her şey ters gider		

		EVET	HAYIR
62	Hareketlerimde hantal ve beceriksizim		
63	Oyunlarda ve sporda, oynamak yerine seyredirim		
64	Öğrendiklerimi çabuk unuturum		
65	Herkesle iyi geçinirim		
66	Çabuk kızarım		
67	Kız arkadaşlarım arasında sevilirim		
68	Çok okurum		
69	Bir grupla birlikte çalışmaktansa tek başıma çalışmaktan hoşlanırım		
70	(Kardeşiniz varsa) Kardeş(ler)imi severim		
71	Vücutça güzel sayılırım		
72	Sık sık korkuya kapılırım		
73	Her zaman bir şeyler düşürür ve kırarım		
74	Güvenilir bir kimseyim		
75	Başkalarından farklıyım		
76	Kötü şeyler düşünürüm		
77	Kolay ağlarım		
78	İyi bir insanım		
79	İşler hep benim yüzümden ters gider		
80	Şanslı bir kimseyim		