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**DISTRESS IN MOTHERS OF CHILDREN WITH HEART
DISEASE: EMOTION REGULATION, SELF-EFFICACY,
CAREGIVING BURDEN AND FAMILY FUNCTIONING**

MASTER'S THESIS

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BOLU 2019

To The Institute of Social Sciences,

The study titled “**Distress In Mothers Of Children With Heart Disease: Emotion Regulation, Self-Efficacy, Caregiving Burden and Family Functioning**”, which belongs to **Selin YALÇIN**, was certified as fully adequate in scope and quality, and as a **thesis for the degree of Master of Science** by the examining committee members.

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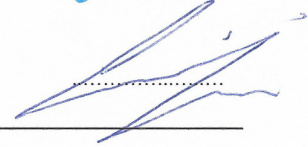
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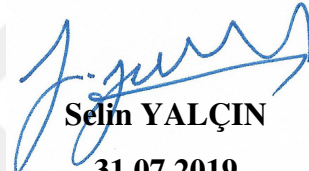
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ETHICAL APPROPRIATENESS DECLARATION

I hereby declare that all information in this study titled “**Distress in Mothers of Children with Heart Disease: Emotion Regulation, Self-Efficacy, Caregiving Burden and Family Functioning**”, were obtained and presented in accordance with the scientific and academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.



Selin YALÇIN
31.07.2019

ABSTRACT

DISTRESS IN MOTHERS OF CHILDREN WITH HEART DISEASE: EMOTION REGULATION, SELF-EFFICACY, CAREGIVING BURDEN AND FAMILY FUNCTIONING

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Having a child with heart disease is a distressful situation for families, especially for mothers. In the light of the Transactional Stress and Coping Model of Adjustment to Chronic Illness, this study aimed to investigate whether psychopathological states of the mothers whose children had heart disease were predicted by caregiving burden, stress, parenting self-efficacy, family functioning, life satisfaction, and cognitive emotion regulation strategies, with the mediation effects between these variables. With sociodemographic and illness related forms, 7 research instruments were used. Findings suggested that, caregiving burden, stress, family functioning and life satisfaction were the predictors of psychopathological symptoms. Among cognitive emotion regulation strategies, catastrophizing and other blame mediated the relation between stress and psychopathological symptoms; life satisfaction and psychopathological symptoms; and family functioning and psychopathological symptoms. Besides, catastrophizing also mediated the relation between stress and caregiving burden. The findings were generally consistent with the previous research findings. Correlational findings, group differences, predictors and mediation relationships were discussed with the strengths and the limitations of the study, future directions and clinical implications.

Key words: Distress, Caregiving Burden, Emotion Regulation, Heart Diseases.

ÖZET

KALP HASTALIĞI OLAN ÇOCUKLARIN ANNELERİNDE PSİKOLOJİK SIKINTI: DUYGU DÜZENLEME, EBEVEYN ÖZYETERLİLİK ALGISI, BAKIM VERME YÜKÜ VE AİLE İŞLEVSELLİĞİ

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Kalp hastası çocuğu olan aileler, özellikle anneler, birçok psikolojik sıkıntı yaşamaktadır. Bu çalışmada kalp hastası çocuğu olan annelerin yaşadığı psikopatolojik semptomların bakım yükü, stres, ebeveyn öz yeterliliği, aile işlevselliği, yaşam doyumu ve bilişsel duygu düzenleme stratejileri ile yordanıp yordanmadığı ile birlikte bu değişkenlerin birbiri ile arasındaki aracı rolünün incelenmesi amaçlanmıştır. Sosyo-demografik ve hastalık değişkenleri formlarıyla birlikte 7 adet ölçek ile kalp hastası çocuğu olan annelerden veri toplanmıştır. Bulgulara göre, bakım yükü, stres, aile işlevselliği ve yaşam doyumu psikopatolojik semptomların yordayıcıları olarak bulunmuştur. Stres ve psikopatolojik semptomlar arasında; yaşam doyumu ve psikolojik semptomlar arasında; ve aile işlevselliği ile psikopatolojik semptomlar arasında felaketleştirmenin ve başkalarını suçlamanın aracı rolü bulunmuştur. Ayrıca stres ve bakım yükü arasında da felaketleştirmenin aracı rolü bulunmuştur. Bulgular önceki çalışmalarla uyumlu niteliktedir. Değişkenler arasındaki korelasyon bulguları, grup farklılıkları, yordayıcılar, aracı roller ile çalışmanın güçlü ve sınırlı yönleri, klinik uygulamalar ve gelecek çalışmalar için öneriler tartışılmıştır.

Anahtar Kelimeler: Psikolojik Sıkıntı, Bakım Yükü, Duygu Düzenleme, Kalp Hastalıkları.



Dedicated to my family...

PREFACE

The process of time I spent for conducting and writing this study required persistence, patience, hope and hard-working, but most importantly the support of valued people nearby with their lasting beliefs and encouragements to overcome this process.

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LIST OF ABBREVIATIONS

BSI	: Brief Symptom Inventory
CHD	: Congenital heart diseases
CER	: Cognitive emotion regulation
CERQ-Short	: Cognitive Emotion Regulation Questionnaire-Short Form
CSEV	: Cardiologist's Perception of Medical Severity
EPS	: Electrophysiology study
FAD-GF	: General Functioning Subscale of McMaster Family Assessment Device
M	: Mean
Max	: Maximum
Min	: Minimum
PSE	: Parenting self-efficacy
PSES	: Perceived Parenting Self-Efficacy Scale
PSS-10	: Perceived Stress Scale-10
SD	: Standard Deviation
SE	: Standard Error
SWLS	: Satisfaction With Life Scale
TL	: Turkish Liras

INTRODUCTION

Heart diseases in children are serious illnesses, which are innate or acquired that can be encountered frequently (Yıldız, Çelebioğlu and Olgun 2009: 40). Heart diseases can cause longest hospital stays and highest mortality rates and hospital charges compared to the other birth defects or acquired diseases which reveals its seriousness (Wei et al., 2015: 494). Under these circumstances, experience of distress can be inevitable for child as well as for other family members, especially for parents.

Understanding the factors which affect distress is very crucial to support parents psychologically at least as discovering the levels of distress. One of the key points to comprehend these factors is how individuals cope with the distress and which emotion regulation strategy they use in which frequency. Another one is how much their distress is related to their belief of parenting self-efficacy. Accordingly, the level of burden they feel while looking after their child with heart disease is of great importance. In addition, whether the general functioning of their family influences the distress and the life satisfaction levels comes into focus.

It is a well-known evidence that mothers report more distress than fathers (Lawoko and Soares 2002; Yıldız, Çelebioğlu and Olgun 2009). Therefore, starting with approaching this issue from the point of mothers would be appropriate.

Having said that there is no study in psychology literature which comprehensively examines mothers' distress in the frame of these factors, this study mainly aims to examine the effect of cognitive emotion regulation, parenting self-efficacy, caregiving burden, family functioning and life satisfaction on the distress in mothers of children with heart disease, as well as the relationship between these factors

based on the Transactional Stress and Coping Model of Adjustment to Chronic Illness developed by Thompson, Gill, Gustafson, George, Keith, Spock and Kinney in 1994.

In the next section, heart diseases are discussed basically, followed by the Transactional Stress and Coping Model of Adjustment to Chronic Illness, and the factors mentioned above influencing distress and caregiving burden in the light of previous research findings.



CHAPTER I

1. LITERATURE REVIEW

1.1. Heart Diseases in Children

Heart diseases in children are held in two sections which are congenital and acquired heart diseases.

Congenital heart diseases (CHD) are identified as a natal dysfunction of heart or blood vessels due to their structural defect or lesions (Yıldız, Çelebioğlu and Olgun 2009: 40). CHD are originated from the structural and functional abnormalities and encountered in approximately 1% of the births in Turkey and worldwide (Ündar et al. 2012: 181). These diseases can be diagnosed pre or postnatal period and more than half of these patients needs at least one or multiple surgical operations and interventions such as angiography or electrophysiological study (Ündar et al. 2012: 181).

Every year 6000 cases of congenital heart diseases arises on average and only approximately 4000 operations are conducted (Ündar et al. 2012: 181). This means at least 2000 cases cannot get benefit from the treatment procedures (Ündar et al. 2012: 181). According to a study which investigated infant mortality rates including 2046 cases, it was found that 9.7 % of the cases' root cause of death was congenital heart diseases (Korkmaz et al. 2013: 110) which indicated the seriousness of these diseases.

Since most of congenital heart diseases are required several operations and long-term treatment process with life-time follow-ups, they are considered as chronic diseases (Torowicz et al. 2010: 202). Like most of chronic disease, congenital heart

diseases also cause psychological and financial burden on the family members of the children with these diseases.

Most common acquired heart diseases are the ones like Acute Rheumatic Heart Disease and Kawasaki Syndrome which causes serious complications such as aneurysms in coronary arteries and myocardial infarctions which can be frequently finalized with death unless an early diagnosis and an immediate intervention held (Kara et al. 2017: 114).

Looking at their seriousness, in general heart diseases in children can cause drawbacks not only in terms of physical health but also in terms of psychological health for ill children and their family (Cousino and Hazen, 2013: 809). The disabilities caused by physically ill-characteristics, long and frequent hospital stays mostly limits the child's physical activities as well as regular educational and social life with the sustained risk of mortality (Uludağ, 2014: 2). Therefore, families, especially primary caregivers of these children can easily experience sustained psychological difficulties on individual and family level related with current and future health state, social and educational life of the children and management of the illness.

1.2. Transactional Stress and Coping Model of Adjustment to Chronic Illness

In general, chronic illnesses seen in a family member poses a risk for decreased psychological adjustment and increased distress for the other members of the family especially for the parents whose child is chronically ill (Young et al. 2002: 1836). Therefore, investigating psychological adjustment of the family members gains importance.

In 1994, Thompson and his colleagues developed the Transactional Stress and Coping Model of Adjustment to Chronic Illness and studied separately on the samples of the mothers whose children was diagnosed with cystic fibrosis and sickle cell disease. This model handles the chronic disease as a stressor which is sought to be adapted on

both individual and family levels (Thompson et al., 1994: 172). Therefore, in the light of the stress and coping literature, they investigated the relationships between the individual and familial psychosocial and illness-related variables that were found to be significantly related with stress and adjustment.

These variables were illness-related characteristics such as type and severity; demographic variables such as child's gender, age and socioeconomic status; the mediational relationships between maternal cognitive processes like stress and appraisal of daily activities, illness-related tasks, efficacy expectations and health locus of control with coping styles, family functioning, adjustment and outcome variable like psychopathological symptoms (Thompson et al., 1994: 172). Figure 1.1. illustrated this model.

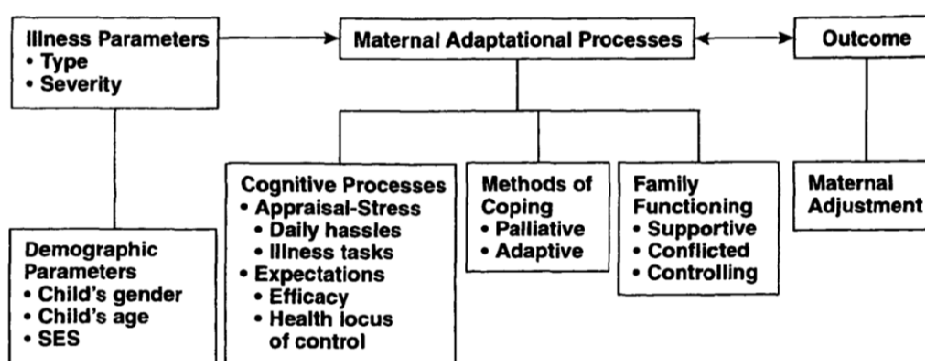


Figure 1.1: Transactional stress and coping model of adjustment to chronic illness (Thompson et al. 1994: 172)

Employing the variables mentioned above, in 1998, Davis and his colleagues applied this model on the sample of 52 mothers whose children diagnosed with congenital heart disease. Findings indicated that the more stress of daily activities and usage of palliative coping style the mothers had significantly referred to weaker psychological adjustment scores (Davis et al., 1998: 225). However, there was no significant relationship between psychological adjustment of mothers and severity of cardiac disease (Davis et al., 1998: 224). Furthermore, in general, nearly 38% of the variance in psychological adjustment of mothers was accounted by the variables they

employed into the model (Davis et al., 1998: 225). Below, the model-related variables employed in this study was discussed.

1.3. Caregiving Burden

Caregiving burden is one of the most frequently studied areas in health psychology since its interaction with other psychological states creates important differences in terms of physical and psychological health of both caregivers and the individuals who are in need in caregiving.

Caregiving burden was firstly emerged as a term referring to the difficulties that family members of mentally ill individuals have, which were related to the disabilities caused from mental disorders (Grad and Sainsbury, 1966: 22). As the research on this area progressed, caregiver burden was also acknowledged to refer the difficulties of being responsible with caring elderly first then to whom have any kind of disability or chronic disease with people from all ages (Atagün et al., 2011: 514).

The first comprehensive definition of caregiving burden was achieved by Zarit, Reever and Bach-Peterson (1980). According to them, caregiving burden consisted of self-perception and reactions of caregivers about their social and financial state, physical and psychological health which were affected by caregiving duties. On the other hand, Schene (1990: 289), in his study giving a broad description of caregiving burden, claimed that there were subjective and objective aspects of burden and draw a frame of eight areas of life for both aspects such as household routine, family relations, social relations, leisure time and career, finances, children and siblings, health, and subjective distress.

In terms of psychopathology, caregiving burden was associated with depression and anxiety that reduces the quality of life, increases the usage of psychotropic drugs and mortality rates as well (Atagün et al., 2011: 518). Anxiety and depression were

found to be positively related with the length of caregiving time, and negatively related with caregiver's leisure time activities and levels of education (Macneil et al., 2010: 80).

Mothers of children with heart disease have difficulties especially when the child's health status got critical, or before and after cardiac surgery when the child's needs reach the peak level. These are the states the caregiving burden the mothers perceived increases, especially the heart disease of the child has congenital or chronic characteristics (Torowicz et al., 2010: 202). Chronic fatigue, sleep disturbances, lack of time for social activities and self-care, financial difficulties related to quitting job, and other caregiving related difficulties were also evident in these mothers (Murphy et al., 2006: 183).

1.4. Cognitive Emotion Regulation (CER)

Given emotions as an important factor which determine individuals' behaviors and functionality, the studies on their various characteristics such as intensity, durability, alteration, how, to what extent, and in which situations individuals demonstrate the emotions have been growing (Thompson, 1994: 26). Besides these characteristics, how an individual regulates his or her emotions comes out to be crucial to develop adaptive coping strategies in various situations. Accordingly, in his review published in 1994, Thompson defined emotion regulation as a set of methods an individual pursues to reach an aim, which can examine, assess and alter emotional reactions considering emotion characteristics. Another simpler definition of emotion regulation was formed by James Gross in 1998 which was "Emotion regulation refers to the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (Gross 1998: 275).

As the definitions and years of research have suggested that emotion regulation process consists of many cognitive actions such as attention, codifying emotional cues and choosing among alternative responses (Thompson, 1994: 35). Hence, in 2001, Garnefski and her colleagues approached emotion regulation as a set of cognitive

coping strategies and presented them as cognitive emotion regulation strategies. According to them, CER has 9 dimensions which were self-blame, other-blame, positive refocusing, positive reappraisal, acceptance, putting into perspective, catastrophizing, focus on thought (rumination), and planning (Garnefski et al., 2004: 274). Positive refocusing, positive reappraisal, acceptance, putting into perspective and planning were found to be theoretically more adaptive strategies whereas self-blame, other blame, catastrophizing and focus on thought were found to be less adaptive strategies (Garnefski et al., 2004: 274).

Positive refocusing, is simply instead of thinking about distressful event or situation, thinking of more pleasant events or situations, in other words, it is a “mental disengagement” (Garnefski, Kraaij and Spinhoven, 2001: 1315). In the case of a mother with a child with heart disease it can be focusing on child’s academic success and avoiding thinking of child’s probability of a necessary cardiac surgery. As might be expected, although this CER strategy can provide benefit in short run, in long run it can undermine coping with the unpleasant situation and turn to be a maladaptive one (Garnefski, Kraaij and Spinhoven, 2001: 1315).

Positive reappraisal is searching for positive aspects of an unpleasant event or situation (Garnefski, Kraaij and Spinhoven, 2001: 1315). Taking cardiac surgery as a valuable life experience the child gains in terms of personal growth can be an example for positive reappraisal.

Acceptance is simply accepting and conceding a situation or an event no matter it is positive or negative, and it can be acknowledged as a step of dealing with that situation or the event (Garnefski, Kraaij and Spinhoven, 2001: 1314). Research has shown that while acceptance is positively related with self-esteem and optimism, it is negatively related with anxiety and depression (Carver et al., 1989: 276).

Putting into perspective is thinking in a way which decreases the importance of a situation or an event that can be based on the comparison of the current situation/event with other situations/events that other people may encounter (Garnefski and Kraaij,

2006: 1046). Thoughts such as there are many other children suffering from worse health issues in worse financial conditions than one's child with heart disease suffers can be an example of putting into perspective.

Planning is premeditating about how to deal with a negative situation/event or the phases to be followed while solving a problem related to that negative event/situation (Garnefski, Kraaij and Spinhoven, 2001: 1315). For example, following the heart disease diagnosis and indication by the doctor of a need for a cardiac surgery, thinking about the necessities and preparations step by step before a cardiac surgery (like thinking about first explaining child about his/her condition, decision making to get the surgery, checking the financial resources for the surgery, then inform the doctor about the decision, making an appointment for the surgery and so on...).

Self-blame means accusing oneself that he/she has caused a negative event/situation to happen (Garnefski, Kraaij and Spinhoven, 2001: 1314). A mother's blaming herself for her child's heart disease because of her genetic inheritance can be an example for self-blame. Research so far have suggested that self-blame is one of the main predictors of depression, anxiety, anger and stress (Martin and Dahlen, 2005: 1254).

Other blame is the thoughts of accusing other individuals or environmental factors for what one has encounter creating negativity (Garnefski et al., 2004: 270). In this case, thoughts about the reason of one's child's heart disease as the genetic heritage of his/her spouse can be one of the most frequently encountered examples of other blame. In the literature, some research findings suggest that other blame is related with problematic behavior solely (McGee et al., 2001: 827), while some other research suggest that it is related to decreased emotional well-being in general (Tennen and Affleck, 1990: 109).

Catastrophizing is thinking in a way with especially focusing on the exaggerated negative aspects and their exaggerated negative consequences of an event or a situation which do not generally reflect the reality of the condition in terms of negativity

(Garnefsky and Kraaij, 2007: 142). Without a valid evidence, thinking about one's child's heart disease as if it is the most critical condition which will turn everyone's lives in the family upside down can be an example of catastrophizing. Many studies have found that catastrophizing is one of the significantly predictors of depression and anxiety (Garnefski, Hossain and Kraaij, 2017: 27).

Focus on thought, which is also called as rumination, is constantly thinking about the feelings and thoughts derived from the negative event or situation (Garnefski and Kraaij 2006: 1046). Thinking about how bad one feel about his/her child's getting heart disease diagnosis can be an example of the rumination. Rumination was found to be highly related to anxiety, depression, eating and substance disorders (Aldao, Nolen-Hoeksema and Schweizer 2010: 229).

Cognitive emotion regulation is also crucial in the case of mother whose children have heart disease. Menahem and his colleagues (2008: 608) have suggested that mothers' emotional distress at the time of their children's cardiac surgery disappears not before than 12 months and they still do not feel and think that they can control their emotional distress.

1.5. Perceived Stress

Stress is not a simple but a complex variable which consists many variables and many processes regarding human and animal adaptation (Lazarus and Folkman 1984: 11). In a simplest way, it can be defined as changing psychophysiological states depending on stimuli and the organism's reactions and responses (Lazarus and Folkman, 1984: 11). To elaborate, stress, which is characterized by negative affect and increased physiological response, occurs when an individual evaluates a stimulus as important, challenging and threatening but cannot form an immediate appropriate response or reaction to overcome it (Cohen and Wills, 1985: 312). Due to its adverse physiological effects, stress plays a crucial role not only in psychological disorders but also for physiological diseases (Cohen and Wills, 1985: 312).

Apart from the general parenting role, the significant stressful sources for parents of child with a pediatric chronic disease are expected to differ from other parents in some areas (Emerson and Bögels, 2017: 2347). Before the diagnosis parents need to deal with their child's poor health conditions and its negative effects on family environment (Emerson and Bögels, 2017: 2347). Then getting the diagnosis they struggle with facing it and dealing with the grief-like reactions such as loss, fear, guilt, anger, and shame (Emerson and Bögels, 2017: 2347). After the diagnosis, they try to cope with the difficulties of giving appropriate caregiving to the child with a period of adjustment to this new condition in their life as an individual, a parent, and a family (Emerson and Bögels, 2017: 2347).

In the context of children with heart disease, previous research suggests that in addition to stress sources mentioned above, perceived stress of parents is strongly in relation with ambiguity of their child's condition, lack of clarity, and information provided by health professionals about the condition (Lee et al., 2007: 121). Social support and internet usage of the parents to contact with relatives and friends as well as to obtain information about their child's condition and to gain an insight about what they are experiencing and might encounter in the future regarding about the child's condition and family relations was also found to be significantly related to the level of stress parents have (Lee et al., 2007: 121).

1.6. Parenting Self-Efficacy (PSE)

Self-efficacy theory was firstly proposed by Albert Bandura in 1977 who suggested that individuals' beliefs about their personal mastery on a future task aimed to reach an expected outcome, depend on their past behavior and to what extent they have accomplished similar tasks in the past. Accordingly, the theory also suggests that how individuals will deal with a stressful problem, how much effort they will make and how much time they will maintain the coping behavior are identified by perceived self-efficacy beliefs (Bandura 1977: 209).

Starting from these, parenting self-efficacy is defined as parents' beliefs of to what extent they can affect their children and their surroundings to enhance their children's development, well-being, and success (Ardelt and Eccles 2001: 945).

In the review of 47 studies by Jones and Prinz (2005: 342) it was suggested that PSE was strongly related to parenting competence, though parents with higher PSE showed more effective parenting than the others, even if in the case of stressful and problematic events or situations that their children came across. In the same study, while PSE was negatively related with depressive symptoms and parental stress, it was positively related with effective coping strategies such as active coping and positive reinterpretation, in other words positive reappraisal (Jones and Prinz 2005: 342).

Moreover, a study conducted on the sample of parents with children going through a surgery, the moderation effect of CER was found on the relationship between PSE and parents' post-surgery anxiety (Miklosi et al., 2013: 5). This finding indicated that in the case of less usage of nonadaptive CER strategies, the more PSE beliefs the parents adopted referred to the less anxiety they reported after their children's surgery (Miklosi et al., 2013: 5).

In a study with the sample of children with cancer and their parents, the parents with higher PSE reported less state anxiety when calming their children before and during a treatment procedure at the hospital (Harper et al., 2013: 1662). In addition, 3 months after the procedure, parents with lower PSE during the procedure, reported higher posttraumatic stress symptoms (Harper et al., 2013: 1662).

1.7. Family Functioning

Family can be explained as a unity of individuals who interacts with each other and creates a structure with a balance and a cohesion which can be maintained but also affected and changed by these interactions (Burgess 1926: 5). Accordingly, when a member of a family develops a disease or a disability, no matter it is mild or critical,

acute or chronic, psychiatric or physical, or a congenital anomaly, because of the fact that it can be a distressful situation for the members of the family individually, the family itself as a whole can be affected and family functioning can be disrupted or improved. Family members' perceptions, beliefs and past experiences about illness and health-related issues intervenes the family functioning and have effects on child's and family's ways of coping with the disease (Kazak 1997: 143). Thus, studying family functioning in the case of a pediatric disease becomes a crucial issue.

Like other chronic illnesses, caregiving and treatment of heart diseases in children can affect family functioning in different aspects such as financial issues because of treatment procedures or required leave of absence of a parent from work (Brosig et al., 2007: 689). Moreover, familial and social relations can be affected because of health and caregiving-related stressors (Brosig et al., 2007: 691). In addition, individual distress members have can affect the family functioning and sense of mastery as a family to cope with the disease (Brosig et al., 2007: 690). Furthermore, the effect of one sibling's heart disease to other siblings in the family can be another aspect (Brosig et al., 2007: 690). In addition, Epstein and his colleagues' (1983) suggested the dimensions for family functioning in general such as family's mastery on problem solving, discharge of responsibilities regarding their roles, management of behavioral control related with rules and order, effective and appropriate communication between family members, affective involvement and responsiveness to each other. All the changes in these aspects and dimensions with heart disease diagnosis require a course of time for adjustment of the family to maintain or reestablish the cohesion and balance within the family (Mussatto 2006: 110). In a longitudinal study sampling child went through heart transplantation, it was found that there was a significant positive correlation between family functioning and emotional adjustment of the patients during 2 years after the transplantation operation (DeMaso et al., 2004: 478). Therefore, family functioning is a complex element which is determined by both individual and interactional psychological and physical factors, and has an influence on many psychological variables again in both individual and interactional levels.

1.8. Life Satisfaction

Besides the investigation of negative psychological states of pediatric heart diseases like psychopathology or stress, an investigation of positive psychological states of parents whose children have heart disease is valuable to identify their strengths in terms of subjective well-being.

Life satisfaction is one of a three components of subjective well-being among affective states and responses like joy, contentment, pride, affection, enthusiasm; and satisfaction in domains like family, work, health, leisure, finance, self, and group (Diener et al., 1999: 277). Accordingly, life satisfaction in general refers to individual's desire to change own life, satisfaction with own past, current and future life, and with the opinions of individual's significant others' about one's life which are all regarding the subjective perception of affective responses and satisfaction in domains mentioned above (Diener et al., 1999: 277).

Life satisfaction in the context of parents of children with chronic disease plays critical role on the effective and appropriate caregiving behavior. Addressing life satisfaction and distress with psychological interventions such as the Mindfulness-Based Stress Reduction and Positive Adult Development, researchers have suggested that these interventions improves life satisfaction and decreases depression and anxiety levels of mothers of children with developmental disorders which directly reflects on their well-being that affects their long-term caregiving practices in a positive way (Dykens et al., 2014: 460).

1.9. Aims and Importance of the Study

In the light of previous research findings in the literature and the Transactional Stress and Coping Model of Adjustment to Chronic Illness, this study mainly aimed to investigate whether and how psychopathological states of the mothers whose children had heart disease have been predicted by caregiving burden, stress, parenting self-efficacy, family functioning life satisfaction and some cognitive emotion regulation

strategies. In addition, the mediation effects between these variables were investigated. Looking at the literature, since previous studies in the literature did not cover these variables altogether and their relationships with each other, studying these variables on the context of mothers of children with heart disease gains importance in terms of filling the gap in the literature about this area with this sample.

1.10. Hypotheses of the Study

Previous findings and the Transactional Stress and Coping Model of Adjustment to Chronic Illness suggested that with sociodemographic variables and illness-related characteristics, cognitive processes like stress appraisal in daily stressors and illness-related tasks, expectations of efficacy and health locus of control with emotion-focused coping style, and family functioning were significantly related with maternal adjustment in the context of chronic diseases (Davis et al. 1998; Thompson et al. 1994). In the light of these findings, the hypotheses of this study were as follows:

1. Caregiving burden, stress, parenting self-efficacy, family functioning, life satisfaction and cognitive emotion regulation strategies would significantly predict psychopathological symptoms of the mothers whose children have heart diseases.
2. Cognitive emotion regulation strategies would mediate the relationship between stress and psychopathological symptoms.
3. Cognitive emotion regulation strategies would mediate the relationship between stress and caregiving burden.
4. Cognitive emotion regulation strategies would mediate the relationship between life satisfaction and psychopathological symptoms.
5. Cognitive emotion regulation strategies would mediate the relationship between family functioning and psychopathological symptoms.

CHAPTER II

2. METHOD

2.1. Participants

The mothers of children with heart disease who were receiving treatment in child cardiology outpatient clinic and child cardiology and cardiovascular surgery inpatient clinic of İstanbul Kartal Koşuyolu Education and Training Hospital were invited to the current study as participants. The number of mothers who agreed to participate to the study was 211.

2.2. Procedure

For this study, the local ethical approval was obtained from the Bolu Abant İzzet Baysal University Ethical Committee for Human Studies in Social Sciences. Also, the permission for data collection was obtained from the hospital administration and the heads of both clinics.

Firstly, in a quiet room in the clinics the study was briefly explained to each participant with its aim, importance, instruments with their approximate completion time and its voluntary basis. After their informed consents were obtained by an informed consent form, they were presented sociodemographic information form and 7 research instruments to complete in a random order for each participant. The instruments were completed with reading the questions by the researcher to the primary and the secondary school graduated participants and the only literate ones. The other

participants filled out the instruments only by themselves. After the instruments were completed the participants were kindly thanked with indicating that they could contact with the researcher about the study any time if they need, and sent with handing a debriefing form about the research. This process took approximately 30 minutes to complete. Only 1 participant was excluded due to the lack of enough number of scales that were answered by her. After each participant, to receive information about each children's illness-related characteristics, patient information form was completed by a pediatric cardiologist in approximately 5 minutes. Table 2.1 shows socio-demographic characteristics of total 210 mothers. Table 2.2 shows illness-related characteristics of these mothers' children with heart disease.

Table 2.1: Sociodemographic characteristics of the participants

	N	%	Mean	SD	Range
Age			34.16	7.19	20-52
Education					
Only Literate	13	6.2			
Primary	83	39.5			
Secondary	43	20.5			
High-School	48	22.9			
University	23	11			
Monthly Income (TL)			2588.88	1559.80	500-10000
Marital Status					
Single	1	.5			
Married	199	94.8			
Divorced/Widowed	10	4.8			
City					
İstanbul	114	54.3			
Kocaeli	24	11.4			
Other (37 Cities)	72	34.3			
Employment Status					
Unemployed	167	79.5			
Full-Time Job	38	18.1			
Part-Time Job	5	2.4			
Number of Family Members			4.49	1.28	2-10
Number of Children			2.32	1.17	1-8
On Leave Status					
No	190	90.5			
Paid Leave	7	3.3			
Unpaid Leave	13	6.2			
Psychological Support					
Yes	48	22.9			
No	162	77.1			
Psychiatric/Neurological Diagnosis					
None	193	91.9			
Depression	6	2.9			
Anxiety	5	2.4			
Panic Disorder	3	1.6			
Panic Disorder + Depression	1	.5			
Bipolar Disorder	1	.5			
Epilepsy	1	.5			

Table 2.2: Illness-related characteristics of the children

	N	%	Mean	SD	Range
Age (months)			80.38	76.44	1-276
Gender					
Female	104	49.5			
Male	106	50.5			
Number of Diagnosis			2.06	.98	1-5
Main Diagnosis					
Ventricular Septal Defect	43	20.5			
Atrial Septal Defect	26	12.4			
Single Ventricle Physiology	17	8.1			
Tetralogy of Fallot's	12	5.7			
Rheumatic Heart Disease	12	5.7			
Other (43 diagnosis)	100	47.6			
Congenital	170	81			
Acquired	40	19			
Time of Diagnosis					
Prenatal	21	10			
Postnatal	189	90			
Diagnosis Period (months)			46.45	61.29	1-276
Inpatient	79	37.6			
Outpatient	131	62.4			
Number of Hospitalizations			1.17	1.33	0-9
Days of Hospitalization			7.54	10.30	0-64
Number of Surgery			.60	.78	0-4
Number of Angiography			.45	.67	0-3
Number of EPS			.02	.153	0-1
Illness-Severity			2.27	.94	1-4
Mild	46	21.9			
Moderate	86	41			
Marked	53	25.2			
Severe	25	11.9			
Other Illness					
None	162	77.1			
Down Syndrome	13	6.2			
Other (28 diagnosis)	35	16.7			

Note: Illness Severity was measured with Cardiologist's Perception of Medical Severity Scale.

2.3. Instruments

The instruments used in this study were the sociodemographic information form, patient information form, the Brief Symptom Inventory (BSI), the Cognitive Emotion Regulation Questionnaire-Short Form (CERQ-Short), the Perceived Stress Scale-10 (PSS-10), the Perceived Parenting Self-Efficacy Scale (PSES), the Burden Interview, the General Functioning Subscale of McMaster Family Assessment Device (FAD-GF) and the Satisfaction With Life Scale (SWLS).

2.3.1. The Sociodemographic Information Form

With this form, socio-demographic information of participants was obtained. Age, marital status, educational status, employment and leave status, monthly income of the family, the city living in, number of children, number of family members, whether they took psychological/psychiatric support before and diagnosed with a mental disorder were asked in addition to child's age and gender, the age he or she diagnosed with heart disease and whether he or she currently had another illness. Appendix A presents the sociodemographic information form.

2.3.2. The Patient Information Form

With this form, it was aimed to acquire an overall illness-related information of a child with heart disease, notably his or her illness severity. Heart disease diagnosis, whether it was identified in pre-natal or post-natal periods, the period since the first diagnosis, the number of hospitalizations, the number of the days of hospitalizations, the number of surgeries and other operations such as angiography and electrophysiology study (EPS) were asked.

For the assessment of illness severity, the Cardiologist's Perception of Medical Severity (CSEV) scale was used. DeMaso et al. (1991) used this scale by rating illness severity in 5 points, however in this study a 4-point rating scale was used since the first point of DeMaso's scale indicates "no or insignificant disorder" which was the condition that were excluded in this study due to it did not correspond to a heart disease and did not influence a child's health. Based upon this, 4 groups of illness severity were identified according to this rating scale:

Group 1 (Mild Disorder): The patients who did not require any operations or surgical interventions, but a long-term follow up was required.

Group 2 (Moderate Disorder): Whether the patient symptomatic or asymptomatic, an easy intervention was undergone or required.

Group 3 (Marked Disorder): The patient was substantially symptomatic and had undergone or required a difficultly applied surgical intervention.

Group 4 (Severe Disorder): The patient had a lesion which was impossible to correct but complex palliative/temporary interventions could be applied.

Appendix B presents the patient information form.

2.3.3. Brief Symptom Inventory (BSI)

BSI was developed by Derogatis and Melisaratos (1983) and adapted into Turkish sample by Şahin and Durak in 1994. It is a 53-item self-report measurement with 5-point Likert type scale ranging from “not at all” (0) to “extremely” (4). In Turkish form, the psychological distress was assessed under 5 subscales which were “anxiety, depression, negative self-concept, somatization and hostility” with higher points refer to higher distress and Cronbach’s alpha was found to be .95 (Şahin and Durak, 1994: 53). In this study, the Cronbach’s alpha of the inventory was .94 which indicating high reliability. Appendix C presents the Brief Symptom Inventory.

2.3.4. Burden Interview

This scale was developed by Zarit, Reever and Bach-Peterson (1980) to measure caregiving burden of individuals who were responsible to care elderly, however in time the scale could be used in other circumstances especially with the caregivers of chronic disease patients, disabled individuals and so on (Bedard et al. 2001: 652). The scale consisted of 22 items with a 5-point Likert type scale ranging from never (0) to always (4) and either the researcher asked the question, or the participants could read and answer themselves (İnci and Erdem 2008: 87). The higher scores in the scale refers to greater burden and stress the caregiver experiences while care giving to his or her relative.

The Turkish adaptation study of the Burden Interview was conducted by İnci and Erdem (2008) and the internal consistency score of the Turkish form was .95. In this

study, the Cronbach's alpha reliability coefficient was found to be .78. Appendix D presents the Burden Interview.

2.3.5. Cognitive Emotion Regulation Questionnaire-Short Form (CERQ-Short)

Since there was no measurement which assessed the cognitive aspects of emotion regulation, first form of the Cognitive Emotion Regulation Questionnaire was developed by Garnefski and her colleagues (2001). It consisted of 36 items with 5 Likert type scale which covered 9 dimensions of cognitive emotion regulation that were "self-blame, other-blame, acceptance, planning, positive refocusing, rumination or focus on thought, positive reappraisal, putting into perspective and catastrophizing" and all these dimensions were assessed in themselves as if they were distinct scales (Garnefski and Kraaij, 2007: 143). The Turkish version of the measurement was developed by Tuna and Bozo (2012).

In 2006, Garnefski and Kraaij developed the short form of the measurement, again which covered the 9 dimensions of cognitive emotion regulation but only with 18 items as 2-item scales representing the dimensions. Same as the first form, it was 5 Likert type scale ranging from almost never (1) to almost always (5) (Garnefski and Kraaij 2006: 1047).

The CERQ-Short was adapted into Turkish by Çakmak and Çevik (2010), and the Cronbach's alpha reliability coefficients of 9 subscales were ranged from .63 to .74 indicating adequate reliability.

In this study, the Cronbach's alpha coefficients of 9 subscales were found to be as followed. For self-blame subscale it was .68, .55 for other blame subscale, .62 for acceptance subscale, .35 for focus on thought subscale, .73 for positive refocusing subscale, .35 for planning subscale, .70 for reappraisal subscale, .66 for perspective subscale, finally .66 for catastrophizing subscale. The low Cronbach's alpha coefficient scores of focus on thought and planning subscales were discussed in the discussion section. Appendix E presents the CERQ-Short.

2.3.6. Perceived Stress Scale-10 (PSS-10)

To measure the level of experienced stress component in physical illnesses and behavioral disorders Cohen et al. developed Perceived Stress Scale in 1983 which was a 14-item 5-point Likert type scale. The reliability measures of the scale turned out to be adequate with a 10-item version and a 4-item version for telephone interviews (Cohen, Kamarck and Mermelstein 1983: 392).

PSS was translated and adapted into Turkish by Eskin and his colleagues (2013) also with 10-item and 4-item version. They found the internal consistency reliability scores of PSS-14, PSS-10 and PSS-4 as .84, .82 and .66, in addition, 2 factors appeared in the scale which were perceived insufficient self-efficacy and perceived stress/distress (Eskin et al. 2013: 137). Higher points in the scale refers to greater experienced stress by the participant. In this study, the 10-item version of the PSS was administered, and the Cronbach's alpha reliability coefficient was found to be .74. Appendix F presents the PSS-10.

2.3.7. Perceived Parenting Self-Efficacy Scale (PSES)

In this study, a measure of parenting self-efficacy which particularly measures the parenting beliefs of coping with the special difficulties originated from being a parent of a child with heart disease was needed. Therefore, utilizing the 5 issues of Moos and Tsu's (1977) work about illness-related tasks which causes stress to the parent, a five-item scale was constituted. Items were developed reflecting the belief for being able to cope with parent's own emotional problems, the distress of the child with heart disease, the economic problems, the problems derived from health-related conditions and symptoms of heart disease, and the uncertainty the future would bring. The participants were asked to rate their levels of belief into those 5 issues on a numerical axis between 0 (no belief) to 10 (strong belief). The higher points in the scale indicated greater parenting self-efficacy. In this study, the Cronbach's alpha reliability coefficient of the scale was .81. Appendix G presents the PSES.

2.3.8. McMaster Family Assessment Device-General Functioning Subscale (FAD-GF)

To assess families within the context of McMaster Model of Family Functioning, FAD was developed by Epstein, Baldwin and Bishop (1983), under the seven subscales which evaluates “Problem Solving, Communication, Roles, Affective Responsiveness, Affective Involvement, Behavior Control, and General Functioning” in the family context. It was a 60-item device with 4-point Likert type scale from 1 (totally agree) to 4 (totally disagree) and more than 2 points in the items, refers to levels of unhealthier family functioning (Epstein, Baldwin and Bishop 1983: 172). FAD was adapted into Turkish by Bulut in 1990. In this study, due to the time reasons and loads of scales and questions of the study, only General Functioning subscale was used which consisted of 12 items.

In the original form, for the whole instrument, the Cronbach’s alpha internal consistency coefficient was reported as .78 and, .92 for the General Functioning subscale (Epstein et al. 1983: 176). In this study, the Cronbach’s alpha coefficient of the General Functioning Subscale was .83. Appendix H presents the FAD-GF.

2.3.9. Satisfaction With Life Scale (SWLS)

To assess global life satisfaction as a part of subjective well-being, Diener and his colleagues developed the Satisfaction with Life Scale in 1985. It was a 5-item short scale with 7-point Likert type rating from totally disagree (1) to totally agree (7), and the higher scores indicated higher life satisfaction. The internal consistency reliability score was .87 (Diener et al., 1985: 72).

The SWLS was adapted into Turkish by Köker (1991) with its 7-point Likert type scale. Later, Dağlı and Baysal (2016) readapted the scale into Turkish with changing its 7-point Likert type scale to 5-point Likert type scale due to their participants’ report which was the statement of 7 points were too much alike each other as meanings and made difficult to choose one. The Cronbach’s alpha internal

consistency coefficient of this Turkish form was .88. In this study, the Turkish form of Dađlı and Baysal were used and the Cronbach's alpha reliability coefficient was found to be .82. Appendix I presents the SWLS.



CHAPTER III

3. RESULTS

The data was analyzed by using the IBM SPSS Version 22 (Statistical Package for the Social Sciences). The data were normally distributed. After calculating the frequencies, means, standard deviations, minimum and maximum values of the participant's socio-demographic characteristics (Table 2.1), and children's illness related characteristics (Table 2.2), these descriptive statistics were investigated also for the instruments used in this study which were illustrated in the Table 3.1.

Table 3.1: Means, standard deviations, minimum, maximum values of the measures

Variables	Mean	SD	Min	Max
BSI	39.00	28.15	.00	158.00
CER Strategy				
Self Blame	3.73	1.70	2.00	10.00
Other Blame	3.07	1.41	1.00	10.00
Acceptance	5.76	2.34	2.00	10.00
Focus on Thought	5.05	1.87	1.00	10.00
Positive Refocusing	5.89	2.36	2.00	10.00
Planning	5.90	2.10	1.00	10.00
Positive Reappraisal	6.44	2.30	1.00	10.00
Perspective Taking	5.99	2.59	1.00	10.00
Catastrophizing	4.33	2.27	1.00	10.00
PSS-10	17.94	6.32	1.00	38.00
Perceived Insufficient Self-efficacy	6.29	2.86	.00	16.00
Perceived Stress/Distress.	11.65	4.50	.00	22.00
PSES	37.95	8.81	10.00	50.00
Burden Interview	26.48	10.92	3.00	60.00
FAD-GF	20.54	6.67	12.00	46.00
SWLS	16.05	4.63	1.00	38.00

Note: BSI = Brief Symptom Inventory; CER = Cognitive Emotion Regulation; PSS-10 = Perceived Stress Scale-10; PSES = Parenting Self-efficacy Scale; FAD-GF = McMaster Family Assessment Device-General Functioning Subscale; SWLS = Satisfaction With Life Scale.

3.1. Correlational Analysis Between Variables

To investigate the relationships between socio-demographic variables, illness-related variables and instruments variables, correlations between these variables were calculated. The results generally were found as expected. The most important correlational findings of the study were reported below:

There was a significant negative correlation between caregiving burden and parenting self-efficacy, $r(208) = -.244, p < .01$; caregiving burden and mothers' levels of education, $r(208) = -.235, p < .01$. It means that, while caregiving burden increased, parenting self-efficacy and mothers' levels of education decreased. On the other hand, there was a significant positive correlation between caregiving burden and age of the children, $r(208) = .208, p < .01$; caregiving burden and the period of time since first diagnosis, $r(208) = .244, p < .01$. It means that, while age of the children and the period of time since first diagnosis increased, caregiving burden also increased.

There was a significant negative correlation between the period of time since first diagnosis and life satisfaction of mothers, $r(208) = -.163, p < .05$; however, a significant positive correlation between the period of time since first diagnosis and their usage of focus on thought, $r(208) = .182, p < .01$. It means that, while the period of time since first diagnosis increased, mothers' usage of focus on thought CER strategy also increased, but their life satisfaction decreased.

There was a significant positive correlation between children's number of the days of hospitalization and mothers' perceived stress, $r(208) = .208, p < .01$. It means that, while number of the days the children stayed in the hospital increased, their mothers perceived stress also increased.

There was a significant positive correlation between mothers' levels of education and planning, $r(208) = .142, p < .05$; mothers' levels of education and perspective taking, $r(208) = .198, p < .01$; and mothers' levels of education and catastrophizing, $r(208) = .175, p < .05$. On the other hand, there was a significant

negative correlation between mothers' levels of education and positive refocusing, $r(208) = -.208, p < .01$.

Finally, there was not any significant correlation between illness severity and psychopathological symptoms, caregiving burden, stress, parenting self-efficacy, family functioning, life satisfaction, or CER strategies. Table 3.2 illustrated the correlation values between variables in the study.



Table 3.2: Correlations between variables

	2	3	4	5	6	7	8	9	10	11	12	13	14
1 Child Age	-.185**	.011	.704**	-.044	-.107	-.010	-.049	.179**	.619**	-.274**	.071	.268**	-.025**
2 Illness Severity		.402**	.129	.544**	.563**	.552**	.438**	-.045	-.177*	-.107	.040	.030	-.121
3 Number of Diagnosis			.168*	.274**	.378**	.320**	.234**	-.105	-.043	-.094	.056	.074	-.127
4 Diagnosis Period				.195**	.130	.283**	.156*	-.029	.370**	-.208**	.070	.218**	-.074
5 Number of Hospitalizations					.722**	.772**	.704**	-.020	-.076	-.159*	.026	.032	-.067
6 Days of Hospitalizations						.699**	.403**	-.063	-.112	-.165*	.078	.075	-.104
7 Number of Surgery							.459**	-.120	-.065	-.183**	.109	.121	-.153*
8 Number of Angiography								-.105	-.124	-.027	.027	-.036	.041
9 Number of EPS									.149*	-.072*	.013	.011	-.021
10 Mother Age										-.272**	.132	.294**	.085
11 Mother's Education Status											-.297**	-.346**	.397**
12 Number of Family Members												.732**	.030
13 Number of Children													-.088
14 Income													

*p < .05; **p < .01

Table 3.2: Continued

	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1 Child Age	.003	.208**	-.076	-.018	.051	-.056	-.011	-.007	-.023	.137*	.144*	.066	.046	.071	.138*
2 Illness Severity	.055	.102	.115	-.058	-.071	.008	.079	-.007	.051	-.024	-.121	-.134	-.118	-.085	.098
3 Number of Diagnosis	-.074	.031	-.002	-.034	-.139*	.105	-.041	.042	.092	-.002	.007	-.050	-.044	-.082	.057
4 Diagnosis Period	.000	.244**	.020	-.058	.061	-.163*	.029	.003	.013	.182**	.122	.073	.011	.053	.122
5 Number of Hospitalizations	-.005	.132	.063	.037	.056	.030	.069	-.029	.070	-.026	.006	-.023	-.038	-.113	.078
6 Days of Hospitalizations	.069	.127	.200**	-.053	.016	.004	.047	-.039	.114	.016	-.006	-.061	-.053	-.006	.117
7 Number of Surgery	-.068	.117	.021	-.036	.037	-.005	.007	-.050	.060	-.026	-.013	-.054	-.079	-.140*	-.008
8 Number of Angiography	-.110	.084	.037	.061	.002	.024	.023	-.027	-.008	-.090	-.070	-.077	-.083	-.106	.048
9 Number of EPS	.034	-.067	-.043	-.024	.003	.100	-.067	-.074	-.011	-.054	.113	.037	.011	.037	-.064
10 Mother Age	-.030	.122	-.086	.068	-.024	.049	.013	-.016	-.011	.100	.084	.050	.051	.029	.107
11 Mother's Education Status	-.123	-.235**	-.034	.043	-.162*	.143*	-.039	.000	.065	.062	-.218**	.142*	-.001	.198**	.175*
12 Number of Family Members	-.028	.041	.068	.048	-.013	-.051	.084	.005	-.044	.042	.045	-.040	.089	-.100	.033
13 Number of Children	-.048	.039	.011	-.076	-.027	-.094	-.064	-.051	-.033	-.005	.051	-.039	-.003	-.017	.059
14 Income	-.023	-.076	-.026	.144*	-.069	.228**	.051	-.041	.052	.013	-.084	.098	-.051	.024	-.041

*p < .05; **p < .01

Table 3.2: Continued

	16	17	18	19	20	21	22	23	24	25	26	27	28	29
15 BSI	.396**	.461**	-.316**	.365**	-.420**	.294**	.342**	-.006	.247**	-.116	-.028	-.104	.051	.483**
16 Caregiving Burden		.268**	-.244**	.291**	-.247**	.259**	.244**	.000	.199**	.074	.052	-.068	.031	.325**
17 Stress			-.398**	.248**	-.419**	.326**	.276**	-.008	.259**	-.220**	-.044	-.249**	-.021	.355
18 PSE				-.219**	.394**	-.203**	-.081	.001	-.146*	.286**	.143*	.331**	-.056	-.291**
19 FAD-GF					-.381**	.207**	.233**	-.048	.053	.011	-.049	-.165*	.030	.233**
20 Life Satisfaction						-.095	-.198**	.108	-.116	.174*	.067	.220**	-.002	-.316**
21 Self Blame							.172*	.055	.371**	-.030	.173*	-.096	.027	.343**
22 Other Blame								-.033	.177*	.045	.098	.007	-.047	.243**
23 Acceptance									.151*	.162*	.159*	.240**	.288**	-.038
24 Focus on Thought										.089	.389**	.229**	.309**	.277**
25 Positive Refocusing											.378**	.516**	.086	-.097
26 Planning												.485**	.262**	.030
27 Reappraisal													.281**	-.151*
28 Perspective Taking														.046
29 Catastrophizing														

*p < .05; **p < .01

3.2. Psychopathology and Caregiving Burden Differences Between Groups: T-test Analyses

Regarding gender, there was not a significant difference in psychopathology scores of mothers between female ($M = 37.63$, $SD = 24.10$) and male ($M = 40.36$, $SD = 30.10$) children conditions; $t(208) = -.700$, $p > .05$. Besides, there was not a significant difference in caregiving burden scores of mothers between female ($M = 25.57$, $SD = 10.82$) and male ($M = 27.37$, $SD = 10.99$) children conditions; $t(208) = -1.20$, $p > .05$. In other words, there were no group differences in between two genders of children in terms of caregiving burden and psychopathology levels of their mothers.

Regarding types of heart diseases, there was not a significant difference in psychopathology scores of mothers between congenital ($M = 39.81$, $SD = 28.94$) and acquired ($M = 35.63$, $SD = 24.56$) heart diseases conditions; $t(208) = .844$, $p > .05$. Besides, there was not a significant difference in caregiving burden scores of mothers between congenital ($M = 26.39$, $SD = 11.24$) and acquired ($M = 26.85$, $SD = 9.52$) heart diseases conditions; $t(208) = -.240$, $p > .05$. In other words, there were no group differences in between children having congenital and acquired heart disease in terms of their mothers' psychopathology and caregiving burden levels.

Regarding the time of the diagnosis, there was not a significant difference in psychopathology scores of mothers between prenatal ($M = 43.95$, $SD = 40.09$) and postnatal ($M = 26.70$, $SD = 10.90$) diagnosis conditions; $t(208) = .848$, $p > .05$. Besides, there was not a significant difference in caregiving burden scores of mothers between prenatal ($M = 24.48$, $SD = 11.18$) and postnatal ($M = 38.46$, $SD = 26.59$) diagnosis conditions; $t(208) = -.884$, $p > .05$. In other words, there were no group differences between children diagnosed with heart disease in prenatal and postnatal period in terms of their mothers' psychopathology and caregiving burden levels.

Regarding patient settings, there was not a significant difference in psychopathology scores of mothers between outpatient ($M = 38.19$, $SD = 28.82$) and inpatient ($M = 40.37$, $SD = 27.14$) conditions; $t(208) = -.542$, $p > .05$. Besides, there

was not a significant difference in caregiving burden scores of mothers between outpatient ($M = 26.69$, $SD = 11.67$) and inpatient ($M = 26.13$, $SD = 9.57$) conditions; $t(208) = .360$, $p > .05$. In other words, there were no group differences between the mothers whose children was an outpatient and whose children was an inpatient in terms of their psychopathology and caregiving burden levels.

Regarding having an additional illness, there was not a significant difference in psychopathology scores between the mothers whose children had heart disease solely ($M = 39.41$, $SD = 28.98$) and the mothers whose children had additional illness/es ($M = 37.65$, $SD = 25.39$); $t(208) = -.381$, $p > .05$. Besides, there was not a significant difference in caregiving burden scores between the mothers whose children had heart disease solely ($M = 25.78$, $SD = 11.01$) and the mothers whose children had additional illness/es ($M = 28.81$, $SD=10.39$); $t(208) = -1.696$, $p > .05$. In other words, there were no group differences between the mothers whose children had heart disease solely and whose children had an additional illness/es.

Regarding marital status, there was a significant difference in psychopathology scores between single ($M = 59.82$, $SD = 42.63$) and married mothers ($M = 37.86$, $SD = 26.82$); $t(208) = -2.551$, $p < .05$. Besides, there was a significant difference in caregiving burden scores between single ($M = 33.27$, $SD = 17.23$) and married mothers ($M = 26.10$, $SD = 10.40$); $t(208) = -2.139$, $p < .05$. These findings indicated that single mothers scored more on psychopathological symptoms and caregiving burden than the married mothers. However, the sample sizes of married ($N = 199$) and single ($N = 11$) mothers were very different. Therefore, this finding should be approached cautiously.

Regarding employment status, there was not a significant difference in psychopathology scores between employed ($M = 40.14$, $SD = 30.81$) and unemployed mothers ($M = 38.72$, $SD = 27.52$); $t(208) = -.295$, $p > .05$. Besides, there was not a significant difference in caregiving burden scores between employed ($M = 27.79$, $SD = 14.35$) and unemployed mothers ($M = 26.14$, $SD = 9.87$); $t(208) = -.295$, $p > .05$. In other words, there were no group differences between employed and unemployed mothers in terms of their psychopathology and caregiving burden levels.

Regarding having psychological support, there was a significant difference in psychopathology scores between mothers who had psychological support ($M = 46.98$, $SD = 29.47$) and who had not before ($M = 36.65$, $SD = 27.40$); $t(208) = 2.255$, $p < .05$. This finding indicated that the mothers who did not have any psychological support before scored more on psychopathological symptoms than others. On the other hand, there was not a significant difference in caregiving burden scores between mothers who had psychological support ($M = 28.40$, $SD = 11.64$) and who had not before ($M = 25.90$, $SD = 10.66$); $t(208) = 1.390$, $p > .05$. In other words, there was a group difference between the mothers who had psychological support and who did not have before in terms of psychopathology levels. However, there was no group difference in two groups in terms of caregiving burden levels.

3.3. Predictor Variables of Psychopathology: Regression Analysis

To investigate the predictor variables of psychopathology, a hierarchical regression analysis was conducted. In the first step of regression analysis, caregiving burden, stress, parenting self-efficacy, family functioning and life satisfaction variables were entered. It was found that this model was significant and accounted for 36% of psychopathology scores, $F(5, 204) = 22.779$, $p < .001$, $R = .599$, $R^2 = .358$. In the second step of regression analysis, self-blame, other-blame, focus-on-thought and catastrophizing were entered to the model. It was found that, this model was significant and accounted for 43% of psychopathology scores, $F(9, 200) = 16.926$, $p < .001$, $R = .658$, $R^2 = .432$. Table 5 illustrated the variables entered each step. In the first step, caregiving burden, $\beta = .223$, $t(209) = 3.684$, $p < .001$; stress, $\beta = .269$, $t(209) = 4.134$, $p < .001$; family functioning, $\beta = .156$, $t(209) = 2.504$, $p < .01$; and life satisfaction, $\beta = -.172$, $t(209) = -2.556$, $p < .01$ were significantly predicted psychopathology. Increase in psychopathology scores was related to higher caregiving burden, stress and family functioning scores. On the other hand, increase in psychopathology scores was related to decrease in life satisfaction scores. In the second step, the variables entered in the first step protected their significance in $p < .05$, furthermore, other blame, $\beta = .128$,

$t(209) = 2.210, p < .05$; and catastrophizing, $\beta = .235, t(209) = 3.751, p < .05$ were significantly predicted psychopathology scores. Increase in psychopathology scores was related to higher other blame and catastrophizing scores. Table 3.3 presents the regression analysis.

Table 3.3: Regression analysis: Predictors of psychopathology

	Predictors	<i>B</i>	Beta β	<i>t</i>	Model R^2
1					.36
	Caregiving Burden	.575	.223	3.684***	
	Stress	1.200	.269	4.134***	
	Parenting Self-efficacy	-.168	-.052	-.820	
	Family Functioning	.659	.156	2.504**	
	Life Satisfaction	-1.046	-.172	-2.556**	
2					.43
	Caregiving Burden	.371	.144	2.410*	
	Stress	.788	.177	2.693**	
	Parenting Self-efficacy	-.114	-.036	-.581	
	Family Functioning	.520	.123	2.042*	
	Life Satisfaction	-.861	-.142	-2.173*	
	Self-Blame	1.027	.034	.551	
	Other-Blame	2.556	.128	2.210*	
	Focus-on-Thought	.669	.044	.751	
	Catastrophizing	2.915	.235	3.751***	

* $p < .05$, ** $p < .01$, *** $p < .001$. Note: The increase in family functioning scores refers to decreased functioning.

3.4. The Mediator Roles of Catastrophizing and Other Blame Between Variables: Mediation Analysis

To investigate mediator roles of catastrophizing and other blame CER strategies on the relationship between variables, PROCESS Macro by Hayes Version 3.0 Model 4 analyses were conducted.

3.4.1. The Mediator Roles of Catastrophizing and Other Blame on the Relationship Between Stress and Psychopathology

Mediation analysis showed that stress significantly predicted catastrophizing $b=.127, SE = .023, p < .001$. Catastrophizing significantly predicted psychopathology $b=4.174, SE = .751, p < .001$. Stress significantly predicted other blame $b = .062, SE=.015, p < .001$. Other blame significantly predicted psychopathology $b = 3.60,$

$SE=1.18$, $p < .01$. When the role of catastrophizing and other blame controlled, the predictive power of stress on psychopathology decreased from $b = 2.054$ to $b = 1.301$, and stress remained predicting psychopathology significantly $b = 1.301$, $p < .001$. Therefore, this finding indicated that catastrophizing and other blame partially mediated the relationship between stress and psychopathology. Indirect effect of stress on psychopathology through catastrophizing was significant $BCa CI [.058, .189]$. Indirect effect of stress on psychopathology through other blame was also significant $BCa CI [.005, .100]$. In other words, stress level increased the usage of catastrophizing; catastrophizing increased the psychopathology level; stress level increased the usage of other blame, other-blame increased psychopathology level in mothers who have children with heart disease. Catastrophizing and other blame increased the effect of stress on psychopathology. Figure 3.1 illustrates the mediator roles of catastrophizing and other blame on the relationship between stress and psychopathology.

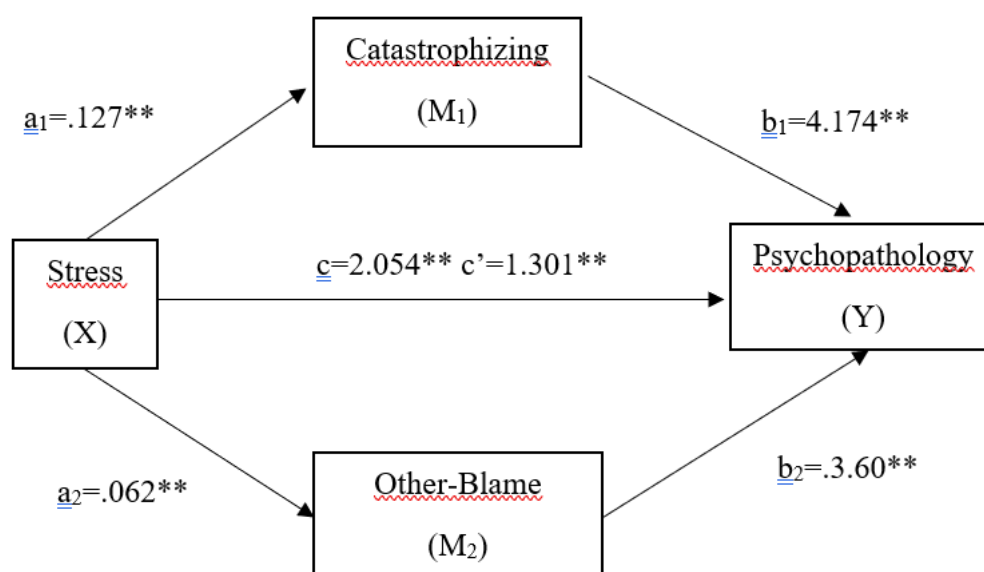


Figure 3.1: Mediator roles of catastrophizing and other blame on the effect of stress on psychopathology.

3.4.2. The Mediator Roles of Catastrophizing and Other Blame on the Relationship Between Stress and Caregiving Burden

Mediation analysis showed that stress significantly predicted catastrophizing $b = .127$, $SE = .023$, $p < .001$. Catastrophizing significantly predicted caregiving burden $b =$

1.150, $SE = .335$, $p < .001$. Stress significantly predicted other blame $b = .062$, $SE = .015$, $p < .001$. Other blame significantly predicted caregiving burden $b = 1.138$, $SE = .525$, $p < .01$. When the role of catastrophizing and other blame controlled, the predictive power of stress on caregiving burden decreased from $b = .464$ to $b = .247$, and stress remained predicting caregiving burden significantly $b = .247$, $p < .05$. Therefore, this finding indicated that catastrophizing and other blame partially mediated the relationship between stress and caregiving burden. The indirect effect of stress on caregiving burden through catastrophizing was significant $BCa\ CI [.032, .148]$. However, the indirect effect of stress on psychopathology through other blame was not significant $BCa\ CI [-0004, .086]$. In other words, the stress level increased the usage of catastrophizing; catastrophizing increased the caregiving burden level in mothers who had children with heart disease. Only catastrophizing increased the effect of stress on caregiving burden. Figure 3.2 illustrates the mediator roles of catastrophizing and other blame on the relationship between stress and caregiving burden.

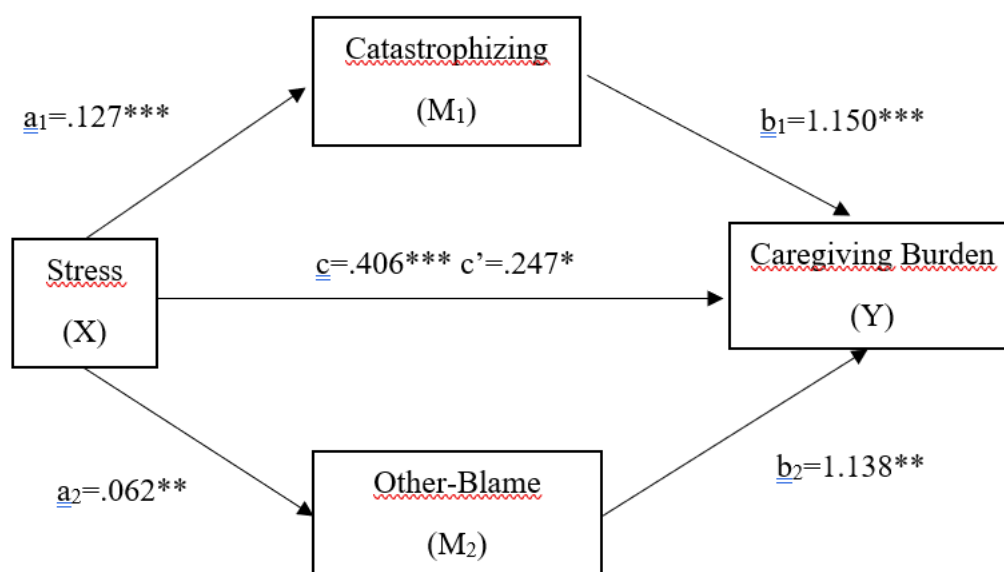


Figure 3.2: Mediator roles of catastrophizing and other blame on the relationship between stress and caregiving burden.

3.4.3. The Mediator Roles of Catastrophizing and Other Blame on the Relationship Between Life Satisfaction and Psychopathology

Mediation analysis showed that life satisfaction significantly predicted catastrophizing $b = -.155$, $SE = .032$, $p < .001$. Catastrophizing significantly predicted

psychopathology $b = 4.330$, $SE = .0749$, $p < .001$. Life satisfaction significantly predicted other blame $b = -.060$, $SE = .020$, $p < .01$. Other blame significantly predicted psychopathology $b = 4.086$, $SE = 1.168$, $p < .01$. When the role of catastrophizing and other blame controlled, the predictive power of life satisfaction on caregiving burden increased from $b = -2.556$ to $b = -1.640$, and life satisfaction remained predicting psychopathology significantly in $p < .001$. The increased predictive power in direct effect of life satisfaction on psychopathology refers to catastrophizing and other blame partially mediated the relationship between life satisfaction and psychopathology, but with decreasing the effect of life satisfaction. Indirect effect of life satisfaction on psychopathology through catastrophizing was significant $BCa\ CI [-.177, -.050]$. The indirect effect of life satisfaction on psychopathology through other blame was also significant $BCa\ CI [-.086, -.006]$. In other words, the life satisfaction level decreased the usage of catastrophizing; catastrophizing increased the psychopathology level; life satisfaction decreased the other blame usage, other blame usage increased psychopathology level in mothers who have children with heart disease. Figure 3.3 illustrates the mediator roles of catastrophizing and other blame on the relationship between life satisfaction and psychopathology.

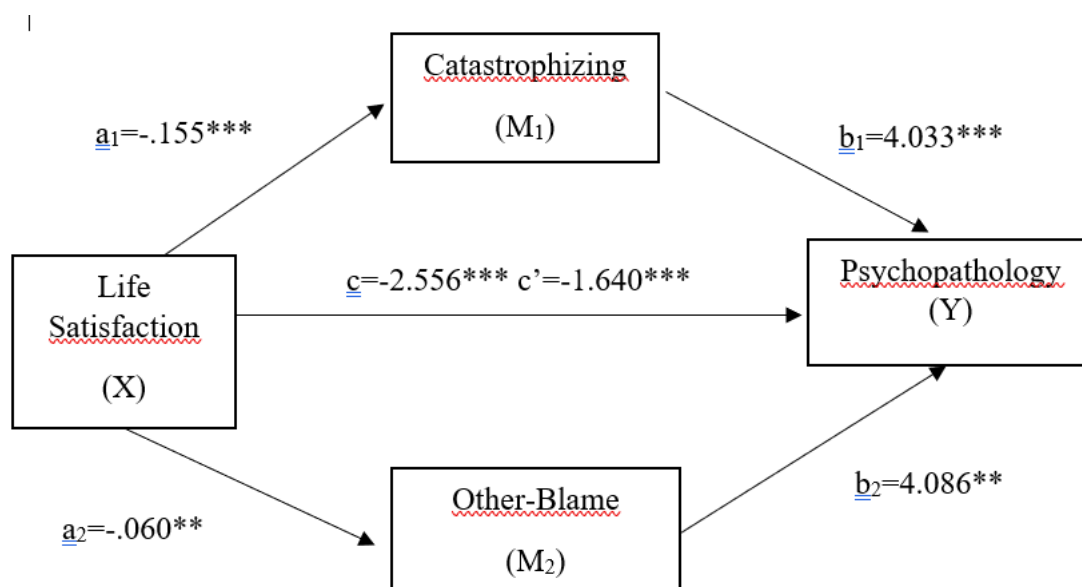


Figure 3.3: Mediator roles of catastrophizing and other blame on the relationship between life satisfaction and psychopathology.

3.4.4. The Mediator Roles of Catastrophizing and Other Blame on the Relationship Between Family Functioning and Psychopathology

Mediation analysis showed that family functioning scores significantly predicted catastrophizing $b = .079$, $SE = .022$ $p < .001$. Catastrophizing significantly predicted psychopathology $b = 4.748$, $SE = .741$ $p < .001$. Family functioning scores significantly predicted other blame $b = .049$, $SE = .0142$ $p < .001$. Other blame significantly predicted psychopathology $b = 3.918$, $SE = 1.194$ $p < .001$. When the role of catastrophizing and other blame controlled, the predictive power of family functioning scores on psychopathology decreased from $b = 1.540$ to $b = .971$, and family functioning scores remained predicting psychopathology significantly $b = .971$, $p < .001$. Therefore, this finding indicated that, catastrophizing and other blame partially mediated the relationship between family functioning scores and psychopathology. Indirect effect of family functioning on psychopathology through catastrophizing was significant, *BCa CI* [.031, .154]. Indirect effect of family functioning on psychopathology through other blame was also significant *BCa CI* [.007, .095]. In other words, an increase in family dysfunction increased the usage of catastrophizing; catastrophizing increased the psychopathology level; an increase in family dysfunction increased the usage of other blame, other-blame increased psychopathology level in mothers who have children with heart disease. Catastrophizing and other blame increased the effect of family dysfunction on psychopathology. Figure 3.4 illustrates the mediator roles of catastrophizing and other blame on the relationship between family functioning scores and psychopathology.

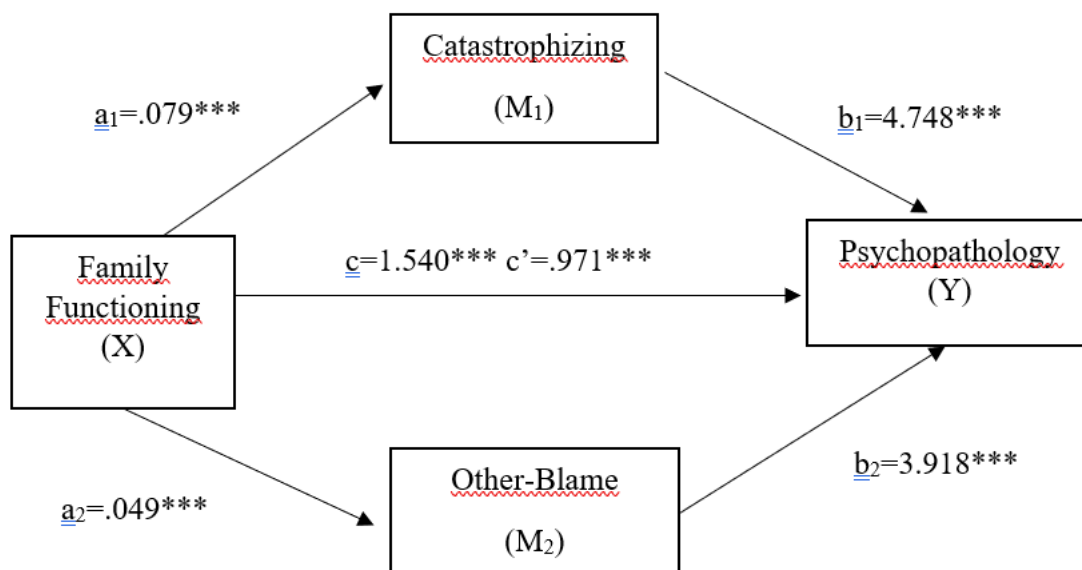


Figure 3.4: Mediator roles of catastrophizing and other blame on the effect of family functioning and psychopathology. Note. The increase in family functioning scores refers to decreased functioning/increased dysfunction.

CHAPTER IV

4. DISCUSSION

4.1. Evaluation of The Results

This study was conducted to investigate firstly whether caregiving burden, cognitive emotion regulation strategies, stress, parenting self-efficacy, family functioning and life satisfaction were predictors of psychopathological symptoms in the mothers who had children with heart disease. The second aim of the study was to detect the mediational roles of cognitive emotion regulation strategies in relation between these variables. Thus, our statistical analysis took shape in accordance with these aims.

In this section, the findings of the study were discussed in the light of previous literature findings in the frame of these aims.

The results of the study were generally in accordance with the Transactional Stress and Coping Model of Adjustment to Chronic Illness as expected and they were also consistent with the previous literature findings.

With the regression analysis the predictors of psychopathology were found. In the first step, caregiving burden, stress, family functioning and life satisfaction significantly predicted distress, psychopathological symptoms. This finding was consistent with the previous findings in the literature in which higher caregiving burden was associated with higher depression and anxiety which also predicted low levels of quality of life that also supports the increases in stress and family dysfunction and decreases in life satisfaction (Atagün et al., 2011: 518). In the second step, in addition to

the previous variables, only catastrophizing and other blame significantly predicted distress. It means that the most strong and maladaptive CER strategies were catastrophizing and other blame in the case of mothers of children with heart disease, which is also supported with previous CER literature (Öngen 2010: 1521). However, adaptive strategies found as predictors of depression previously such as positive refocusing (Öngen 2010: 1521) were not found even correlated with psychopathological symptoms in this study.

Mediation analysis were conducted to investigate the mechanisms between psychopathology, caregiving burden, stress, family functioning and life satisfaction with the exploration of the role of catastrophizing and other blame CER strategies on these mechanisms.

In the first mediation analysis it was found that catastrophizing and other blame partially mediated the relation between stress and psychopathology. It means that, catastrophizing and other blame increased the effect of stress on psychopathology. This was expected because stressful life events like one's children being ill may lead to maladaptive coping strategies which may lead to psychopathological symptoms, distress by adopting catastrophic thoughts such as thinking about the worst conditions, like loss of the child, even if they do not reflect the real situation (Fonseca, Nazare and Canavarro 2011: 14). Additionally, mothers may tend to blame others more, like their spouse and his family's genetic heritage, about the appearance of heart disease in their child which may also disturb family relations, lead social isolations and loss of social support that may cause distress as well (Fonseca, Nazare and Canavarro 2011: 14).

In the second mediation analysis, it seems that catastrophizing and other blame partially mediated the relationship between stress and caregiving burden. However indirect effect of stress on caregiving burden through other blame was not significant. So, it can be concluded that only catastrophizing partially mediated the relationship between stress and caregiving burden. It means that catastrophizing increased the effect of stress on caregiving burden. This relationship between variables is consistent with the studies claiming the stress's predictive role on the difficulties with caregiving a child

with chronic illness (Emerson & Bögels, 2017: 2347). The mediator role of catastrophizing on caregiving burden may be interpreted as that because the exaggerated thoughts of child's health conditions may also directly lead to overly exaggerated thoughts of difficulty to manage the disease and caregiving tasks.

In the third mediation analysis, partial mediation roles of catastrophizing and other blame on the relation between life satisfaction and psychopathology seems expected. Catastrophizing and other blame decreased the positive effect of life satisfaction on the decline in psychopathological symptoms. This finding refers to the costs of adopting maladaptive coping strategies on psychological well-being. On the other hand, the decrease in life satisfaction might lead to an increase in usage of catastrophizing and other blame, which leads to the increase in psychopathological symptoms. This finding was supported with a study suggesting the group difference in perceived quality of life between high and low catastrophizing usage of the participants (Börsbo, Peolsson and Gerdle 2008: 566).

In the last mediation analysis, catastrophizing and other blame partially mediated the relationship between family functioning scores (measuring dysfunction) and psychopathology which means catastrophizing and other blame increased the effect of family dysfunction on psychopathology. In other words, the impairments in family functioning leads to maladaptive coping skills like thinking the worst scenario and blaming the others like other family member for one's negative life events such as blaming the father or sibling for the child's health conditions as mentioned before. This mediational effect is consistent with the previous findings referring significant relationships between social support, family functioning, coping styles and psychopathology (Davis et al., 1998: 224).

Looking at the transactional stress and coping model in chronic illness, this study's findings were generally consistent with the model. Mediator roles of coping mechanisms (corresponds to maladaptive CER strategies, which were catastrophizing and other blame in this study), in relation to cognitive processes (self-efficacy beliefs, perceived stress in this study) and family functioning variables on the outcome of

distress in the model (Thompson 1994: 172) supported the findings of this study. This study also referred to maternal adjustment processes with its mediation relations to understand the mechanisms between independent variables and mainly psychopathological symptoms and caregiving burden as dependent variables. However, one difference which is the inclusion of illness parameters (illness severity and type) in the model that was not found significantly related with any dependent or independent variables of this study. Nevertheless, previous studies and the study by Davis and his colleagues (1998: 225) that tested the model also found no relation of illness severity to the mothers' level of distress.

Looking at the correlational values, while child age increased the caregiving burden the mothers' perceived also increased. Besides the health risks emerged from the heart diseases and financial burden, until toddlerhood, caregiving children is generally comprised of meeting their basic needs such as their nutrition and physical health. While children are growing up, especially when they reach school age, the health risks and financial burden remain, even generally increase, but additionally their needs also may rise more in terms of some aspects and managing with them in an appropriate way may increase the caregiving effort of parents necessarily. Firstly, children's physical activities increase gradually, and this refers to increased health risks in the case of a heart disease. Secondly, the limitation in physical activities accompanied by frequent hospital visits, surgical operations, and hospitalizations may cause the attendance declines at school and undermines their education life which requires extra effort for meet educational needs to make them reach to their peers. Moreover, again the limitations in physical activities and long hospital stays also may hinder children's social and psychological development. This finding of the study was also supported by Fitzgerald et al. (2018) in the study in which they had found a significant positive relationship between caregiving burden and child's age.

Longer time periods after diagnosis and higher number of days of hospitalizations also increased with stress, caregiving burden, and usage of maladaptive CER strategies like catastrophizing and focus-on-thought as expected which reflects the

growing psychological difficulty of managing the heart disease as the time passes in a hospital context dealing with critical health conditions.

There was a strong negative relationship between mother's education and caregiving burden, which indicated an increase in mother's education status goes with a decrease in caregiving burden. It may be possible firstly because of mother's with higher education have more financial resources, so their families are affected by health expenditures of their children less financially than the mothers with lower education. Secondly, it may be easier to reach appropriate useful information about child's heart disease for mothers with higher education so that they can manage the care of the child with heart disease in an easier way which may support them to perceive their caregiving burden less. Furthermore, the positive relationship between mother's education and income; income and parenting self-efficacy; the negative relationship between parenting self-efficacy and caregiving burden also support this situation with an emphasis on the importance of self-efficacy beliefs as a parent of a children with heart disease such as beliefs of being able to cope with one's own and her child's emotional distress, financial burden, symptoms the child experiences and future uncertainties derived from heart disease as stated in PSES. In addition, higher mothers' education seems also goes parallel with employing more adaptive coping mechanisms such as planning and perspective taking which supports the previous explanations. On the other hand, there is a strong negative relationship between mother's education and positive refocusing; a positive relationship between mother's education and catastrophizing which is interesting. In addition to no previous findings encountered in this direction, however, this situation can be interpreted again with the highly educated mothers' easier way of reaching the broader information about heart disease and the other parents in a similar situation, especially through the internet and social media. This may lead to the misevaluations of the illness severity of one's own child, comparing the child's situation with other conditions or patients without a reliable knowledge about their conditions, because as seen in the illness-related characteristics of this study (see Table 2), there are several different heart disease diagnosis and conditions which have different characteristics in terms of severity and management.

In the literature, some studies have found that child's illness severity was in relation with the distress of mothers (Brosig et al. 2007; Thompson et al. 1994; Yıldız, Çelebioğlu and Olgun 2009). For instance, in the study in which transactional stress and coping model was formed on the sample of mothers of children with cystic fibrosis and sickle cell disease, Thompson and his colleagues (1994: 180) indicated that maternal adaptation process was significantly related to illness parameters referring to severity. On the other hand, more studies, including the one testing the transactional stress and coping model on mothers of children with congenital heart disease, have claimed that illness severity was not related to distress of mothers (Davis et al. 1998; Doherty, et al. 2009; Frank et al. 2010). In this study, it was also found that illness severity was neither correlated with psychopathological symptoms (BSI scores), nor caregiving-burden, stress, perceived self-efficacy, family functioning, life satisfaction or any of CER strategies.

In the literature, most previous studies only included mothers of children with congenital heart diseases into their sample (Wei et al., 2015). Therefore, the psychological states of mothers of children with acquired heart diseases have been neglected, despite having a child diagnosed with a heart diseases after all healthy period of time with no problem with the heart can be also distressful and frustrating and may give rise to the similar emotional reactions such as shock, fear and guilt. Moreover, in both congenital and acquired heart diseases, children's families may share similar perceptions about their quality of life, and both children were advised physical limitations in daily life and sports activities (Marino, 2009: 711). Supporting this point of view, in this study there was no significant difference between mothers of children with congenital heart disease and mothers of children with acquired heart disease in terms of their levels of psychopathological symptoms and caregiving burden.

In this study, single mothers experienced more psychopathological symptoms and caregiving burden than married mothers. Bearing in mind that this finding should be approached cautiously since married and single mothers' sample sizes were not equal, this finding can be explained with less social support single mothers receive while dealing with the child's health conditions than married mothers. In addition, being

single imputes all financial, social and psychological burden of life, oneself and the children with the health condition of the child on a single person, therefore single mothers' higher distress was expected. This was also supported with the previous studies (Bachner-Melman et al., 2018; Rousou et al., 2019). However, in the future studies selection of the equal sample sizes of these two groups should be a point to consider for drawing more valid conclusions.

Receiving a psychological support in the context of having a child with critical diseases proved importance in the previous studies which sampled parents of children with serious health conditions (Mangurian et al., 2018: 369). In this study this was also supported with the finding that mothers who had received any psychological support before showed less psychopathological symptoms than mothers who had not. Therefore, psychological support in this context helps to reduce distress. However, there was not a significant difference between those mothers in terms of caregiving burden. This finding suggested that mothers of children with serious health conditions should be supported also with interventions which were aimed and directed at reduction of the caregiving burden they perceived and experienced.

One issue was the low reliability Cronbach's alpha of focus-on-thought and planning subscales of CERQ-Short. It was interesting because the other 7 subscales' reliability coefficients of the CERQ-Short were in acceptable degrees. The full CERQ (36 items) and CERQ-Short are widely used instruments despite some controversial issues about the reliabilities of their subscales. For example, Lee et al. (2018: 7) offered a 6-factor structure of CERQ-Short rather than the original 9-factor version. However, despite Ireland and his colleagues have found some weekly fitting items like "I often think about how I feel about what I have experienced" in rumination (focus on thought) subscale ($\alpha=.47$), in addition to some overlapping items, in their conclusion they supported the factorial validity of the original scale (2017: 93). More importantly, there were studies which approaches the usage of Cronbach's alpha in a critical way that may explain this and previous studies' low reliability findings in original CERQ-Short and their alternative factor-structural offers. For example, in a discussion article by Sijtsma (2009: 119), which broadly discusses meaning, misusages and limited usages of

Cronbach's alpha on many aspects, it was concluded that alpha was not equal to a scale's reliability, nor it is related to the internal structure of a scale. Moreover, to decide about one scale's reliability, a single test administration was not enough, he claimed. (Sijtsma, 2009: 119). Additionally, in another similar article discussing what Cronbach's alpha actually means, Tavakol and Dennick (2011: 54) claims that Cronbach's alpha value itself was formed based on the tau equivalent model, a model that stipulates and requires enough numbers in a scale. Therefore, low number of items in a scale violates the model's assumption and undermines a test's real reliability (Tavakol and Dennick 2011: 54). An adaptation study of another scale also accepted $\alpha=.39$ for a subscale with showing the same reason, the effect of low number of items (Yıldız 2017: 134). In each subscale of CERQ-Short, there were only 2 items. Therefore, Cronbach's alpha values of subscales might not reflect the actual reliability. Thus, for this study, it was decided to keep focus on thought and planning subscales since they were also important parts of CER strategies.

4.2. Strengths of the Study

The most important strength of this study is that it was conducted with the special sample of mothers whose children were heart disease patients in clinical settings. Reaching out this sample, especially with a high sample size of the participants (210 mothers), provided crucial information about the real-life extents of distress and caregiving burden the mothers experience with their emotion-related coping strategies.

Additionally, in this study, both congenital and acquired heart disease patients' mothers were included into sample unlike the previous studies which mostly included only congenital heart diseases patients' mothers (Wei et al., 2015). Hence, in this study, it was suggested that congenital and acquired heart diseases conditions were not different from each other in terms of mothers' experiences of psychopathological symptoms and caregiving burden levels. This finding provided base of the future studies which will approach the pediatric heart diseases in general focusing on the mothers' psychological experiences to draw more inclusive conclusions.

Furthermore, although 54% of the participants were from İstanbul, there were participants from many diverse regions of the country (from 39 different cities), which increases the generalizability of the findings to Turkey.

In addition, among the CER strategies, only catastrophizing and other blame significantly and consistently predicted the psychopathology. This finding might be a special for this population of Turkish mothers whose children have heart disease because it might have a cultural aspect special for Turkish sample. Especially about the other blame, accusing others for the negative events can be assumed as a frequently encountered thinking style in daily life which makes the individual weaker in terms of overcoming the negative event or situation because it is generally followed by the thinking that the individual has nothing to do by own self. Besides, this thinking style may also cause a decrease in social support and an increase in social isolation which paves the way for psychopathology, caregiving burden, stress and disturb in family relations. This situation may become a vicious cycle enhancing these negative psychological factors and maladaptive coping strategies. In a previous study conducted in Turkey, it was found that catastrophizing and other blame were also the only maladaptive predictors of depression among female participants which supports this study's finding (Öngen 2010: 1521). On the other hand, in another study conducted in United States, their findings were not only specific to catastrophizing and other blame in predicting depression, anxiety, stress and trait anger (Martin and Dahlen 2005: 1256). Therefore, emphasizing of a possible cultural difference can be one of the strengths of this study.

4.3. Limitations, Future Directions, and Clinical Implications

One limitation of this study is the lack of child adjustment parameters like child's cognitive processes and coping mechanisms which were presented in the original Transactional and Stress Model of Adjustment to Chronic Illness (Thompson et al. 1994: 172). For future studies, these variables can be included to find out how they are affected from other variables and contributed to the maternal adjustment/distress.

Lack of fathers in the sample is another limitation of the study. Collecting data from the fathers and looking at the picture in their point of view may lead to different findings and open to new directions which can be conducted in future studies.

The usage of the self-report instruments is also a limitation because factors such as social desirability may interfere with the results and the perception of one's own state may be subjective and cannot reflect the actual state of the individual. Therefore, for the future studies interviews with the individual and their spouse or another family member may be more beneficial.

To assess parenting self-efficacy, a 5-item rating scale was developed for this study in accordance with the context of pediatric heart disease, and it was found out that parenting self-efficacy did not predict psychopathological symptoms significantly. In the future studies, a more structured and comprehensive parenting self-efficacy scale can be developed and used in accordance with this context so that the predictive role of parenting self-efficacy can be investigated more comprehensively and in a more deep and detailed way.

In this study, although there were participants from 39 different cities in Turkey, which is a strength of this study, 54% of the participants were from İstanbul. A broader study can be held that includes all regions and participants from different, smaller and bigger cities with larger and equal sample sizes which can provide more generalizable findings.

In the future studies, the children's ages can be grouped as ranges of ages so that the group differences in psychological variables of mothers can be investigated between different ranges of children's ages.

Additionally, this study suggested that family functioning was in relation with distress and caregiving burden the mothers experienced as a component of social support. In the future studies, with employing variables from different sources of social support (spousal support, support from friends, from other parents whose children have

similar conditions, from extended family or nuclear family members, and so on...), it will be possible to investigate which sources of social support helps these mothers better to cope with their distress.

In this study, only mediator roles of variables were investigated. In future studies, moderating roles of the variables can also be investigated to understand the mechanisms between variables.

The variables and mediation relationships in this study and Transactional Stress and Coping Model of Adjustment to Chronic Illness can also be tested on families which do not have a member having a chronic disease to see the possible different effects and to compare clinical and non-clinical sample.

Psychological interventions can be improved or developed handling the variables in this study or the model step by step to improve family members' adjustment to the illness. Psychoeducational interventions can be conducted about the relationships and effects of different factors, maladaptive coping styles to create awareness and replace them with more adaptive ones. Especially interventions directed to managing the caregiving burden perception, and reaching out the valuable sources of social support in an appropriate way can be carried out for the future clinical implications.

4.4. Conclusion

Heart diseases in children are the critical conditions which affect family members, especially mothers' psychological states in a negative way (Uludağ 2014; Yıldız et al. 2009). In the light of the previous findings and the Transactional Stress and Coping Model of Adjustment to Chronic Illness, the relationship between variables of psychopathology, caregiving burden, cognitive emotion regulation strategies, stress, parenting self-efficacy, family functioning and life satisfaction were tested in this study. In general, aims of the study were reached. Caregiving burden, stress, family functioning and life satisfaction were found as predictors of psychopathology in

mothers whose children have heart diseases. The mediation effects of catastrophizing and other blame CER strategies between these variables were investigated. There were some strengths and limitations of the study. In general, the findings were consistent with the previous findings with new mediation relationships in between slightly different variables in the context of mothers of children with heart diseases in Turkey, and pave the way of future studies in the context of the pediatric heart diseases.



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APPENDICES

Appendix A: Sociodemographic information form

KİŞİSEL BİLGİ FORMU

Cocuk Bilgileri

- Çocuğun adı soyadı:
- Çocuğun cinsiyeti:
- Kalp hastalığı teşhisi çocuğunuz kaç yaşındayken kondu?
- Kalp hastalığı dışında çocuğunuzun başka bir fiziksel ya da ruhsal, doğuştan ya da sonradan ortaya çıkmış bir rahatsızlığı var mı? Varsa belirtiniz.

Anne Bilgileri

- Adınız Soyadınız:
- Yaşınız:
- Medeni durumunuzu işaretleyiniz:
Bekar___ Evli___ Boşanmış/Dul___
- Eğitim Düzeyinizi İşaretleyiniz:
Okuryazar___ İlkokul___ Ortaokul___ Lise___ Üniversite___ Yüksek Lisans/Doktora___
- Yaşadığınız Şehir:
Çocuğunuzun tedavisi için yaşadığınız şehirden taşınmak zorunda kaldınız mı ya da seyahat etmek zorunda kalıyor musunuz? İşaretleyiniz.
Evet___ Hayır___
- Siz dahil ailenizde toplam kaç kişi var?
- Kalp hastalığı tanısı alan çocuğunuz dahil toplam kaç çocuğunuz var?
- Şu anki çalışma durumunuzu işaretleyiniz.
Çalışmıyor___ Tam zamanlı çalışıyor___ Yarı zamanlı çalışıyor___
- Çocuğunuzun hastalığı nedeniyle işinizden izin aldınız mı? Evet___ Hayır___
Evet ise: Ücretli izin___ Ücretsiz izin___
- Evin ortalama aylık gelirini belirtiniz:
- Daha önce psikiyatrik ya da psikolojik destek aldınız mı? Evet___ Hayır___
Evet ise, tanı aldıysanız belirtiniz:

Appendix B: Patient information form**HASTA BİLGİ FORMU**

- Değerlendiren doktorun adı soyadı:
- Hastanın Adı Soyadı:
- Kalp Hastalığı Tanısı ya da Tanıları:
- Tanı aldığı zamanı işaretleyiniz: Doğum Öncesi___ Doğum Sonrası___
- İlk tanıdan bu yana geçen süre:
- Hastaneye yatış sayısı:
- Hastaneye yatırılan toplam gün sayısı:
- Varsa ameliyat sayısı:
- Varsa geçirdiği diğer operasyonları ve sayısını belirtiniz:
- Sizde hastalık şiddeti açısından bu hasta hangi gruba giriyor? İşaretleyiniz:
 - Grup 1 (hafif hastalık): Herhangi bir cerrahi müdahale ya da başka bir işlem gerektirmeyen, sadece uzun dönem takip gerektiren hastalar
 - Grup 2 (orta şiddette hastalık): Semptomatik ya da asemptomatik, ama basit bir operasyon/müdahale geçirmiş ya da geçirmeyi gerektiren hastalar
 - Grup 3 (belirgin hastalık): Oldukça semptomatik, uygulaması zor bir cerrahi müdahale geçirmiş ya da geçirmeyi gerektiren hastalar
 - Grup 4 (ağır hastalık): düzeltilmesi mümkün olmayan, ancak kompleks hafifletici/geçici müdahaleler uygulanabilen hastalar

Appendix C: Brief Symptom Inventory

KSE

Aşağıda insanların bazen yaşadıkları belirtiler ve yakınmaların bir listesi verilmiştir. Listedeki her maddeyi lütfen dikkatle okuyun. Daha sonra o belirtinin sizi bugün dahil, son bir haftadır ne kadar rahatsız ettiğini yandaki kutulardan uygun olananın içini işaretleyerek gösterin. Her belirti için sadece bir yeri işaretlemeye ve hiçbir maddeyi atlamamaya özen gösterin. Fikir değiştirdiyseniz ilk yanıtınızın üstünü karalayın.

	Hiç	Biraz	Orta Derecede	Oldukça fazla	Ciddi derecede
1. İçinizdeki sinirlilik ve titreme hali	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Baygınlık, baş dönmesi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Bir başka kişinin sizin düşüncelerinizi kontrol edebileceği inancı	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Başınıza gelen sıkıntılardan dolayı başkalarının suçlu olduğu düşüncesi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Olayları hatırlamada güçlük	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Çok kolayca kızıp öfkelenme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Göğüs (kalp) bölgesinde ağrılar.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Meydanlık (açık) alanlardan korkma duygusu	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Yaşamınıza son verme düşünceleri	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. İnsanların çoğuna güvenilmeyeceği düşüncesi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. İştahta bozukluklar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Hiç bir nedeni olmayan ani korkular	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Kontrol edemediğiniz duygu patlamaları	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Başka insanlarla beraberken bile yalnızlık hissetme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. İşleri bitirme konusunda kendini engellenmiş hissetme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Yalnızlık hissetme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Hüzünlü, kederli hissetme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Hiçbir şeye ilgi duymama	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Ağlamaklı hissetme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Kolayca incinebilme, kırılma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. İnsanların sizi sevmediğine kötü davrandığına inanmak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Kendini diğerlerinden daha aşağı görme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Mide bozukluğu, bulantı	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Diğerlerinin sizi gözlediği ya da hakkınızda konuştuğu inancı	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Uykuya dalmada güçlük	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Yaptığınız şeyleri tekrar tekrar doğru mu diye kontrol etme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. Karar vermede güçlükler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Otobüs, tren, metro gibi umumi vasıtalarla seyahat etmekten korkma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Nefes darlığı, nefessiz kalma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Sıcak, soğuk basmaları	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Sizi korkuttuğu için bazı eşya, yer, etkinliklerden uzak kalmaya çalışma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Kafanızın birden bomboş kalması	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Bedeninizin bazı bölgelerinde uyuşmalar, karıncalanmalar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. Günahlarınız için cezalandırılmanız gerektiği düşüncesi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Gelecekle ilgili umutsuzluk duyguları içinde olmak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. Konsantrasyonda (dikkati bir şey üzerinde toplamada) güçlük/zorlanma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. Bedenin bazı bölgelerinde zayıflık, güçsüzlük hissi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. Kendini gergin ve tedirgin hissetme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. Ölüm ve ölmek üzerine düşünceler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. Birini dövme, ona zarar verme, yaralama isteği	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. Bir şeyleri kırma/dökme isteği	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42. Diğerlerinin yanındayken kendini çok fazla gözlemek, yanlış bir şeyler yapmamaya çalışmak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43. Kalabalıklarda rahatsızlık duymak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. Bir başka insana hiç yakınlık duymamak	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. Dehşet ve panik nöbetleri	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. Sık sık tartışmaya girme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. Yalnız bırakıldığında/kalındığında sinirlilik hissetme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. Başarılarınız için diğerlerinden yeterince takdir görmediğiniz düşüncesi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49. Yerinde duramayacak kadar gergin ve tedirgin hissetme.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50. Kendini değersiz görme, değersizlik hissi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51. İzin verdiğiniz takdirde insanların sizi sömüreceği düşüncesi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52. Suçluluk duyguları	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53. Aklınızda bir bozukluk olduğu düşünceleri	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix D: Burden Interview

BVYÖ

Açıklama: Aşağıda, insanların bir yakınına bakım verirken ortaya çıkan duygu, düşünce ve deneyimlerini yansıtan sorular bulunmaktadır. Siz bu soruları kalp hastalığı tanısı olan çocuğunuzu düşünerek cevaplayınız (sorulardaki “yakınınız” sözcüğü kalp hastalığı tanısı olan çocuğunuza yöneliktir). Bu sorulardaki durumları ne kadar sıklıkla yaşadığınızı her ifadenin karşısındaki uygun kutucuğu işaretleyerek belirtiniz.

	0=Hiçbir Zaman 1=Nadiren 2=Bazen 3=Oldukça Sık 4=Her zaman	Hiçbir Zaman	Nadiren	Bazen	Oldukça Sık	Her Zaman
1	Yakınınızın ihtiyacı olduğundan daha fazla yardım istediğini düşünüyor musunuz?	0	1	2	3	4
2	Yakınına harcadığınız zamandan dolayı, kendinize yeterince zaman ayıramadığınızı düşünüyor musunuz?	0	1	2	3	4
3	Yakınına bakım verme ile aile ve iş sorumluluklarınızı yerine getirme arasında zorlandığınızı düşünüyor musunuz?	0	1	2	3	4
4	Yakınınızın davranışları nedeniyle rahatsızlık duyuyor musunuz?	0	1	2	3	4
5	Yakınınızın yanındayken kendinizi kızgın hissediyor musunuz?	0	1	2	3	4
6	Yakınınızın diğer aile üyeleri ya da arkadaşlarınızla ilişkilerinizi olumsuz yönde etkilediğini düşünüyor musunuz?	0	1	2	3	4
7	Geleceğin yakınına getirebileceklerinden korkuyor musunuz?	0	1	2	3	4
8	Yakınınızın size bağımlı olduğunu düşünüyor musunuz?	0	1	2	3	4
9	Yakınınızın yanındayken kendinizi gergin hissediyor musunuz?	0	1	2	3	4
10	Yakınınızla ilgilenmenin sağlığını bozduğunu düşünüyor musunuz?	0	1	2	3	4
11	Yakınınız nedeni ile özel hayatınızı istediğiniz gibi yaşayamadığınızı düşünüyor musunuz?	0	1	2	3	4
12	Yakınına bakmanın sosyal yaşamınızı etkilediğini düşünüyor musunuz?	0	1	2	3	4
13	Yakınınızın bakımını üstlendiğiniz için rahatça/kolay arkadaş edinemediğinizi düşünüyor musunuz?	0	1	2	3	4
14	Yakınınızın sizi tek dayanağı olarak görüp, sizden ilgi beklediğini düşünüyor musunuz?	0	1	2	3	4
15	Kendi harcamalarınızdan kalan paranın yakınına bakım için yeterli olmadığını düşünüyor musunuz?	0	1	2	3	4
16	Yakınına bakmayı daha fazla sürdüremeyeceğinizi hissediyor musunuz?	0	1	2	3	4
17	Yakınınız hastalandığı zaman yaşamınızın kontrolünü kaybettiğinizi düşünüyor musunuz?	0	1	2	3	4

	0=Hiçbir Zaman 1=Nadiren 2=Bazen 3=Oldukça Sık 4=Her zaman	Hiçbir Zaman	Nadiren	Bazen	Oldukça Sık	Her Zaman
18	Yakınınızın bakımını bir başkasının üstlenmesini ister miydiniz?	0	1	2	3	4
19	Yakınınız için yapılması gerekenler konusunda kararsızlık yaşıyor musunuz?	0	1	2	3	4
20	Yakınınız için daha fazlasını yapmak zorunda olduğunuzu düşünüyor musunuz?	0	1	2	3	4
21	Yakınınızın bakımında yapabileceğiniz işin en iyisini yaptığınızı düşünüyor musunuz?	0	1	2	3	4
22	Yakınına bakarken genellikle ne kadar güçlük yaşıyorsunuz?	0	1	2	3	4

Appendix E: Cognitive Emotion Regulation Scale-Short Form (CERQ-Short)

BDDÖ-KF

Herkesin başından istenmeyen veya tatsız birçok olay geçmiştir veya geçmektedir ve herkes bu duruma kendi yöntemleriyle karşılık vermektedir. İSTENMEYEN VEYA TATSIZ DURUMLARLA KARŞILAŞTIĞINIZDA genellikle ne şekilde düşündüğünüzü, aşağıda yer alan sorular aracılığıyla belirtmeniz istenmektedir.

	1 (Neredeyse) Hiçbir zaman 2 Bazen 3 Düzenli olarak 4 Sık sık 5 (Neredeyse) Her zaman	Hiçbir zaman	Bazen	Düzenli olarak	Sık sık	Her zaman
1	Bu olay yaşandı, gerçekleşen durumu bu şekilde kabullenmem gerektiğini düşünürüm.	1	2	3	4	5
2	Gerçekleşen olay karşısında başkalarını suçlarım.	1	2	3	4	5
3	Gerçekleşen olayın sorumlusu olarak kendimi görürüm.	1	2	3	4	5
4	Yaşanan kötü olayı kabul etmem gerektiğini düşünürüm.	1	2	3	4	5
5	Bu olayla ilgisi olmayan güzel şeyler düşünürüm.	1	2	3	4	5
6	Diğer insanların çok daha kötü deneyimler yaşayabileceklerini düşünürüm.	1	2	3	4	5
7	Yaşadığım olayın ne kadar kötü olduğunu sürekli düşünürüm.	1	2	3	4	5
8	Gerçekleşen olaydan başkalarının sorumlu olduğunu düşünürüm.	1	2	3	4	5
9	Yaşanan olayın, üzerimde neden bu şekilde bir duygu yarattığını anlamak isterim.	1	2	3	4	5
10	Yaşanan bu kötü olayı düşünmek yerine güzel şeyler düşünürüm.	1	2	3	4	5
11	Durumu nasıl değiştirebileceğimi düşünürüm.	1	2	3	4	5
12	Yaşanan kötü olayın aynı zamanda olumlu yönlerinin de bulunduğunu düşünürüm.	1	2	3	4	5
13	Yaşananların kaynağı olarak kendimi görürüm.	1	2	3	4	5
14	Başımdan geçen kötü olayın, bende harekete geçirdiği duygular üzerinde düşünürüm.	1	2	3	4	5
15	Yapabileceğim hamlelerle ilgili bir plan düşünürüm.	1	2	3	4	5
16	Durumun pozitif yönlerini ararım.	1	2	3	4	5
17	Kendi kendime hayatta daha kötü şeyler olduğunu söylerim.	1	2	3	4	5
18	Durumun ne kadar korkunç olduğunu sürekli düşünürüm.	1	2	3	4	5

Appendix F: Perceived Stress Scale-10 (PSS-10)

ASÖ-10

Açıklama: Aşağıda geçtiğimiz ay içerisindeki kişisel deneyimleriniz hakkında bir dizi soru yöneltilmektedir. Her soruyu dikkatlice okuyup size en uygun seçeneğin altındaki kutuya bir çarpı işareti koyarak cevaplayınız. Soruların doğru veya yanlış cevabı yoktur. Önemli olan sizin duygu ve düşüncelerinizi yansıtan yanıtları vermenizdir.

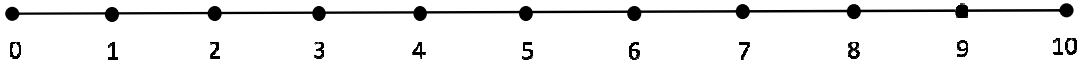
	Hiçbir Zaman	Neredeyse Hiçbir Zaman	Bazen	Oldukça Sık	Çok Sık
0: Hiçbir Zaman					
1: Neredeyse Hiçbir Zaman					
2: Bazen					
3: Oldukça sık					
4: Çok sık					
1. Geçen ay, beklenmedik bir şeylerin olması nedeniyle ne sıklıkta rahatsızlık duydunuz?	0	1	2	3	4
2. Geçen ay, hayatınızdaki önemli şeyleri kontrol edemediğinizi ne sıklıkta hissettiniz?	0	1	2	3	4
3. Geçen ay, kendinizi ne sıklıkta sınırlı ve stresli hissettiniz?	0	1	2	3	4
4. Geçen ay, kişisel sorunlarınızı ele alma yeteneğinize ne sıklıkta güven duydunuz?	0	1	2	3	4
5. Geçen ay, her şeyin yolunda gittiğini ne sıklıkta hissettiniz?	0	1	2	3	4
6. Geçen ay, ne sıklıkta yapmanız gereken şeylerle başa çıkamadığınızı fark ettiniz?	0	1	2	3	4
7. Geçen ay, hayatınızdaki zorlukları ne sıklıkta kontrol edebildiniz?	0	1	2	3	4
8. Geçen ay, ne sıklıkta her şeyin üstesinden geldiğinizi hissettiniz?	0	1	2	3	4
9. Geçen ay, ne sıklıkta kontrolünüz dışında gelişen olaylar yüzünden öfkelenediniz?	0	1	2	3	4
10. Geçen ay, ne sıklıkta problemlerin üstesinden gelemeyeceğiniz kadar biriktiğini hissettiniz?	0	1	2	3	4

Appendix G: Perceived Parenting Self-Efficacy Scale (PSES)

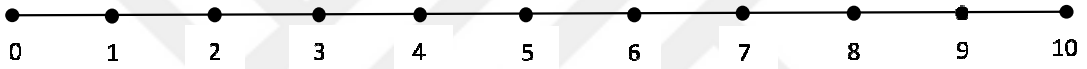
EÖAÖ

Şu anki kendi duygu ve düşüncelerinizi göz önüne aldığınızda, aşağıda verilen ifadelerin size ne derecede uygun olduğunu 0 ile 10 arasında bir sayıyla değerlendirerek çizgi üzerinde işaretleyiniz (0=hiç uygun değil, 10=çok uygun).

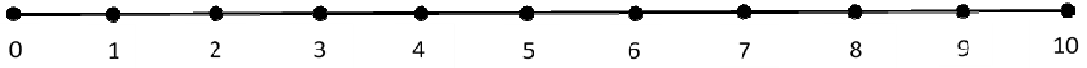
1. Kendi duygusal sıkıntılarım ile baş edebileceğime inanıyorum.



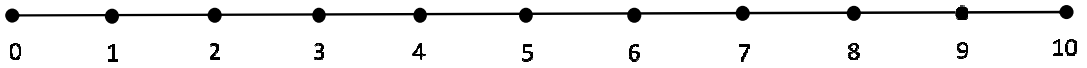
2. Kalp hastalığı tanısı almış çocuğumun duygusal sıkıntılarıyla baş edebileceğime inanıyorum.



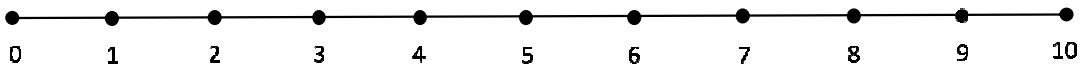
3. Şu an yaşadığım ya da ileride karşılaşılabileceğim ekonomik zorluklarla baş edebileceğime inanıyorum.



4. Çocuğumun kalp rahatsızlığından kaynaklanan sağlık problemleri ve hastalık belirtilerinin yarattığı sıkıntılarla baş edebileceğime inanıyorum.



5. Gelecekte karşılaştığım belirsiz durumlarla baş edebileceğime inanıyorum.



Appendix H: McMaster Family Assessment Device-General Functioning Subscale (FAD-GF)

ADÖ-Gİ

Açıklama: Aşağıda aileler hakkında 12 cümle bulunmaktadır. Lütfen her cümleyi dikkatlice okuduktan sonra, sizin ailenize ne derecede uyduğuna karar veriniz. Önemli olan, sizin ailenizi nasıl gördüğünüzdür. Her bir cümle için, verilen 4 seçenekten (Aynen Katılıyorum, Büyük Ölçüde Katılıyorum, Biraz Katılıyorum, Hiç Katılmıyorum) size uygun olanın altındaki kutucuğu işaretleyiniz. Mümkün olduğu kadar çabuk ve samimi cevaplar veriniz. Kararsızlığa düşerseniz, ilk aklınıza gelen doğrultusunda, hareket ediniz. Lütfen her cümleyi cevapladığınızdan emin olunuz.

	1=Aynen Katılıyorum 2=Büyük Ölçüde Katılıyorum 3=Biraz Katılıyorum 4=Hiç Katılmıyorum	Aynen Katılıyorum	Büyük Ölçüde Katılıyorum	Biraz Katılıyorum	Hiç Katılmıyorum
1	Ailece ev dışında program yapmada güçlük çekeriz, çünkü aramızda fikir birliği sağlayamayız.	1	2	3	4
2	Bir sıkıntı ve üzüntü ile karşılaştığımızda, birbirimize destek oluruz.	1	2	3	4
3	Evde dertlerimizi üzüntülerimizi birbirimize söylemeyiz.	1	2	3	4
4	Ailemizin üyeleri, birbirlerine hoşgörülü davranırlar.	1	2	3	4
5	Ailecek, korkularımızı ve endişelerimizi birbirimizle tartışmaktan kaçırırız.	1	2	3	4
6	Duygularımızı birbirimize açıkça söyleyebiliriz.	1	2	3	4
7	Aile içinde genellikle birbirimizle pek iyi geçinemeyiz.	1	2	3	4
8	Aile içinde birbirimize hoşgörülü davranırız.	1	2	3	4
9	Ailemizde herhangi bir şeye karar vermek her zaman sorun olur.	1	2	3	4
10	Aile içinde, herhangi bir sorunun (problemin) nasıl çözüleceği hakkında kolayca karar verebiliriz.	1	2	3	4
11	Evde birbirimizle pek iyi geçinemeyiz.	1	2	3	4
12	Aile içinde birbirimize güveniriz.	1	2	3	4

Appendix I: Satisfaction With Life Scale (SWLS)

YDÖ

Aşağıda yaşamınızla ilgili genel ifadeler verilmiştir. Bu ifadelerin size ne kadar uygun olduğunu verilen 1 ile 5 arasındaki seçeneklerle değerlendirerek, ifadenin karşısındaki size uygun seçeneğin kutucuğunu işaretleyiniz. Her ifade için yalnız bir seçenek işaretleyiniz ve lütfen her ifadeye dürüst ve içtenlikle cevap veriniz, boş bırakmayınız.

	1=Hiç Katılmıyorum 2=Çok Az Katılıyorum 3=Orta Düzeyde Katılıyorum 4=Büyük Oranda Katılıyorum 5=Tamamen Katılıyorum	Hiç Katılmıyorum	Çok Az Katılıyorum	Orta Düzeyde Katılıyorum	Büyük Oranda Katılıyorum	Tamamen Katılıyorum
1	İdeallerime yakın bir yaşantım vardır.	1	2	3	4	5
2	Yaşam koşullarım mükemmeldir.	1	2	3	4	5
3	Yaşamımdan memnunum.	1	2	3	4	5
4	Şimdiye kadar yaşamdan istediğim önemli şeylere sahip oldum	1	2	3	4	5
5	Tekrar dünyaya gelsem hayatımdaki hemen hemen hiçbir şeyi değiştirmezdim.	1	2	3	4	5