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THE RELATIONSHIP BETWEEN THE GAIN OF RESOURCES AND BURDEN  
OF CARE IN CAREGIVERS TO CANCER PATIENT

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Kanser Hastası Bakım Verenlerinde Kaynak Artışının Bakım Veren Yüğü ile İlişkiş

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## **Abstract**

The main purpose of this quantitative research is to investigate the relationship between the gain of resources of caregivers to cancer patients and the caregiver burden. The research was planned as a cross-sectional study based on the theoretical approach of the Conservation of Resources Theory and Biopsychosocial Approach. The sample of the study consists of caregivers and accompanying relatives of cancer patients at a university hospital providing outpatient chemotherapy treatment services. In this study, data was collected from 96 participants through snowball sampling. Participants were given a questionnaire package including an inform-consent form, demographic form, The Gain of Resources Scale (COR-e) and Zarit Caregiver Burden Scale. ANOVA and t-test analyzes were used to measure the comparisons of demographic data with variables. According to the results of these surveys, data were analyzed by Pearson correlation test to examine the relationship between resource gain and caregiver burden, and by hierarchical regression analysis to measure the effect of resource gain on caregiver burden. The findings revealed that the caregiver burden had a significant relationship with two subscales in The Resource Gain Scale ( $p > 0.05$ ). A negative correlation was found between general interpersonal resources subscale and the caregiver burden, and a positive correlation was found between material resources subscale and the caregiver burden. As a result of 4 step hierarchical model, gender, general interpersonal resources, and material resources were found to be significant predictors of caregiver burden. Consequently, it was found that 95,8% of the caregivers accompanying the patients in the chemotherapy service were family members, and when the general interpersonal resources of the caregiving family members increased, the caregiver burden decreased.

*Keywords:* Conservation of resources, caregiver burden, cancer, chronic illness, biopsychosocial model

## Özet

Bu niceliksel araştırmanın temel amacı kanser hastalarının bakım verenlerinin kaynak artışı ve bakım veren yükü arasındaki ilişkiyi incelemektir. Araştırma, Kaynakları Koruma Teorisi ve Biyopsikososyal yaklaşımın teorik altyapılarına dayandırılarak, kesitsel bir çalışma olarak planlanmıştır. Araştırmanın örnekleme, ayaktan kemoterapi hizmeti veren bir üniversite hastanesinin, kanser hastalarına bakım veren ve eşlik eden yakınlarından oluşmaktadır. 96 kişiye ulaşılan bu çalışmada, örneklem seçimi kartopu yöntemi ile yapılmıştır. Katılımcılara anket paketinde, araştırma izin formu, sosyo-demografik form, Kaynakların Artışı Ölçeği (COR-e) ve Zarit Bakım Veren Yükü Ölçeği verilmiştir. Araştırma değişkenlerinin demografik bilgiler açısından karşılaştırılması ANOVA ve t test analizleri kullanılarak yapılmıştır. Elde edilen bulgular doğrultusunda bakım veren yükünün, kaynak artışı ölçeğindeki 2 alt ölçekle anlamlı ilişkisi olduğu saptanmıştır ( $p<0.05$ ). Değişkenler arasındaki ilişki Pearson Korelasyon testi ile, kaynak artışının bakım veren yüküne etkisi de Hiyerarşik Regresyon analizi ile test edilmiştir. Genel ilişkiel kaynaklar alt ölçeği ve bakım veren yükü arasında negatif yönde, maddi kaynaklar alt ölçeği ile bakım veren yükü arasında ise pozitif yönde bir korelasyon ilişkisi bulunmuştur. Dört aşamalı hiyerarşik regresyon modeli sonucuna göre, cinsiyetin, genel ilişkiel kaynakların ve maddi kaynakların, istatistiksel açıdan anlamlı bir düzeyde bakım veren yükünü yordadığı bulunmuştur. Araştırmanın sonucunda, kemoterapi servisinde hastalara eşlik eden bakım verenlerin %95,8'inin aile üyesi olduğu ve bakım veren aile üyelerinin genel ilişkiel kaynakları artış gösterdiğinde, bakım veren yükünde bir azalma olabileceği bulgusuna rastlanmıştır.

*Anahtar kelimeler:* Kaynakların korunması, bakım veren yükü, kanser, kronik hastalık, biopsikososyal model

## **CHAPTER I: INTRODUCTION**

This study aims to examine the relationship between gain in conservation of resources and burden of family caregivers to cancer patient during the treatment of cancer through in-depth definition and analysis of the concepts of cancer, caregiver burden, biopsychosocial approach and conservation of resources with a focus on family resilience. The rationale behind getting deep into the systems theory and conservation of resources (COR) theory is to reach a comprehensive understanding of the problem that the study is based on: not only the physical or behavioral but also the psychological effects of treatment process on the family caregivers (Bevans & Sternberg, 2012).

As the concepts and theories given above have been partially studied or referred in the literature so far, the aim of this study is not solely questioning the association between the effect of variables such as stress, emotional, physical, and psychological well-being on caregivers. To address this relation, this study primarily focuses on the conservation of resources theory (Hobfoll, 1989; Hobfoll & Freedy, 1993) and develop an understanding to explain how the family caregivers are affected and may be supported through treatment of chronic illnesses, and cancer by enhancing resources (Deng, Coyle-Shapiro & Yang, 2018). In regards to social support recourses referred above, Hobfoll suggests that stress is one of the key elements in the gain and loss of resources. According to conservation of resources theory, there is a relationship between the caregiver burden and the concept of gain and loss. Another tenet of COR theory highly related to our resource-based perspective is that caregivers evaluate stressors in different ways depending on their relationship with the patient (Hobfoll, 1989; Hobfoll & Shirom, 2001). Such evaluations can modify the intensity or difficulty of dealing with stress factors and thus the amount of resources gained or lost. This, ultimately, affects the burden that family caregiver experience through the treatment. While Hobfoll's theory states that accumulation of resource losses is more powerful than resources gains over time, when connecting resiliency to his theory, he underlines the

importance of accumulating resources in order to build resilience (Hobfoll, Stevens, & Zalta, 2015).

On the other hand, one of the primary motives for this study is that the literature lacks the focus on the conservation of resources by the family caregivers in the treatment of cancer as a chronic illness. As for the other foundation of this study is based on, biopsychosocial model, it is defined based on the systems theory of Weiss and Bertalanffy (Weiss, 1959; Weiss, 1977; Bertalanffy, 1952; Bertalanffy, 1969). Family, together with other elements and factors, is introduced as one of the vital parts of the treatment. In order to understand the cancer as a disease, it is also necessary to consider the biological factors as well as the individual, the patient-physician relationship, the family and the social environment, and how these factors may be related to the occurrence of symptoms. Although millions of family caregivers suffer from caregiver burden, this is usually underestimated in the treatment process (Adelan, Tmanova & Delgado, 2014). A caregiver is a paid carer or a family member of a patient who helps him/her with daily activities and needs. Caregiver burden is the stress or psychological difficulties that caregivers are loaded on due to problems and challenges of caregiving activities or the process itself (Zarit, Reever, & Bach-Peterson, 1980).

The caregiver burden is a complex and complicated state due to its multi-dimensional nature (Bevans & Sternberg, 2012). Turkish Public Health Institution states that cancer is responsible from the 20% of deaths of the general population in Turkey (Turkish Public Health Institution, 2015). These data show the importance of caregiving concept in Turkey. Therefore, a holistic action must be taken towards all the elements of the treatment process after the detailed definition and analysis of cancer, biopsychosocial approach, conservation of resources, specifically resource gain, and caregiver burden and how the family caregivers are affected through the treatment process.

## 1.1. Cancer: Definition of Cancer as a Chronic Illness

### *Thoughts on Being Diagnosed with Cancer*

“I’m a 63-year-old grandad and I’m married to a wonderful lady. We hope to celebrate our 40th wedding anniversary in May 2012. We have two children adopted as babies, a boy and a girl, and a niece who we treat and regard as our daughter; we also have a granddaughter and another on the way. My poem reflects my thoughts, feelings and emotions shortly after I was diagnosed with cancer. Perhaps it may help some other sufferers or their family members to read it, and I offer it on that basis.”

John Kehoe - 24th. November 2010

“A Stranger Comes to Call  
Some weeks ago, through medical doubt  
I met someone I'd heard lots about  
I never thought our paths would cross  
Our meeting left me at a loss.  
I'd had no contact with this guy  
He picked me out..... I wonder why?”

J. Kehoe

Mark Z. Danielewski define maturity as discovering the acceptance of ‘not knowing’ in his book titled *House of Leaves*. It is beyond doubt that “not knowing” and uncertainty are the hardest experiences for all the living. When one gets diagnosed with cancer, he/she experiences hard and indefinite times in life and one’s relatives and the immediate circle accompany the social, medical and emotional processes with him/her. According to systems theory, a chronic illness directly affects the patients’ quality of life, social and economic life, daily routines, business life; however, it indirectly affects the people around the patient’s psychosocially and functionally (Falvo, 2005). Cancer, as a chronic illness presents the

facts of life to the patient and patients' environment from a different perspective; thus, creating a struggle for coping with uncertainty.

At this point, it can be argued that there is an intrinsic connection between maturity and acceptance. Thus, everyone who has been affected by cancer has matured throughout the process of fighting against the disease. On that account, cancer would be the name given to an uncontrolled and uncertainty process of human health. Apart from that as a medical term, cancer is the uncontrolled growth and spread of cells, and it can affect almost any part of the body. Furthermore, the growths frequently infect encircling tissue and can metastasize to the further zones (WHO, 2019).

World Health Organization (WHO), defines chronic illness as disease that necessitates constant treatment and care yet cannot be healed completely despite the treatment and rehabilitation for 3 months or more, causing malfunctioning of the patient and affecting the quality of life to a great extent. Chronic diseases are divided into four categories: cancer, cardiovascular diseases, chronic lung diseases and diabetes (WHO, 2014). The period of chronic illness makes it essential for both the patients and the family caregivers to receive medical treatment as well as psycho-social support (Corrigan & Adams, 2003). Taking all the physiological and psychological effects through the period into consideration, it is clear that not only the patient but also the family system shares the emotions and the sources of stress accompanied with the illness. As a consequence, Rolland (1994) emphasizes the importance of inclusion of family system into the treatment period. Cancer is one of the four main chronic diseases reported by WHO and increasing in prevalence. As a chronic illness, cancer needs to be defined well psycho-socially, medically, epidemiologically and etiologically from the family system and all caregivers' perspectives (WHO, 2014).

### **1.1.1. Epidemiology and Etiology of Cancer**

Epidemiology is the frequency of illness occurring in different populations and possible reasons attached. Within the frame of information about epidemiology of

cancer, there seems to be differences in how the data about the facts of cancer retrieved and how it is evaluated in Turkey and in other countries. Data provided by the national and international health organizations usually refer to the last 5 years; and this will make it necessary for us to add insights from the current statistics.

Cancer is the second leading cause of death worldwide, and it is the reason for approximately 9.6 million deaths in the year 2018. Globally, almost 1 in 6 deaths is because of cancer (WHO, 2018). According to the most recent data revealed by the Turkish Public Health Institution, representational numeric data of cases of cancer in Turkey is slightly beyond average of cases around the world. As for the number of cancer cases in male and female patients, 205,4 males and 165,3 females out of 100.000 people suffer from a type of cancer. The average of International Agency for Research on Cancer (IARC, 2019) seems to be more than that, 236,4 in males, and 192,5 in females. However, the rates of cancer cases in the EU and USA are over and above the average of Turkey. According to statistics by Turkish Public Health Institution, every 314,9 males and 243,2 females in the EU countries have cancer while 347 males and 297,4 females in the USA contracted cancer. To be specific, as reported by WHO in 2014, the number of male deaths due to cancer was 58.400 while the number for females was 32500. Compared to the USA and the developed countries in the EU, it is clear that the cases of cancer in Turkey are not so high (Turkish Public Health Institution, Cancer Department, 2014).

Etiology is the science of knowledge about the sources and causes of things. More specific to medical science, etiology deals with the causes and origins of diseases. According to the most recent studies, cancer-causing mutations are regarded as either inherited or environmental (Cristian Tomasetti, Lu Li, Bert Vogelstein, 2017). The main factors having significant effects on the etiology of cancer are smoking -active or passive-, tobacco use, chronic infections, consumption of alcohol, generation factors, radiation, and endogenous and exogenous hormones (Çetin, 2013). There are mainly two types of risk factors, preventable and unpreventable. Age, gender and family background are unpreventable, yet consumption of tobacco and alcohol, radiation, viruses,

malnutrition, additives in the nutrients, exposure to sunlight and ultraviolet, and air pollution are all preventable factors, which, indeed, occur more as the cause of cancer cases. To put it another way, all causes of cancer examined, it can be argued the preventable factors have a more significant roles leading to cancer (Kutluk & Kars, 2001). As can be seen above, the types and causes of cancer vary from interited to environmental ones. This would lead us to the point that cancer could be approached not only from a biomedical perspective, but also with a focus on bio-psycho-social model.

### **1.1.2. Varieties of Cancer Types**

The conditions explained about the epidemiology of cancer would also refer to the data about the major types of cancer and the geographical distribution of the cases. The data would be more meaningful when compiled by sex.

In Turkey, the major type of cancer is lung cancer, followed by prostate, colorectal, bladder, gastric. In the European Union countries, just as in the USA, the main type of cancer is observed as prostate, lung, colorectal, bladder, and kidney respectively. According to IARC, the most common type of cancer is prostate, and it is followed by lung, colorectal, gastric, and bladder. As for the world average, lung cancer seems to be the most common type, and then comes prostate, colorectal, gastric, and liver. Despite the fact that the order of cancer types differs in accordance with the incidence of the disease, it is obvious that the types of cancer are basically similar. Thus, it is possible to evaluate that cases of cancer observed in males mostly have similar intensity all around the world.

On the other hand, just like the types of cancer cases for men, the cases for women are generally in similar types although the types are slightly different. According to the table of distribution of the five most common cancer types in men in Turkey, the most common types of cancer are breast, thyroid, colorectal, lung, uterus corpus cancers respectively. Moreover, in United States of America and the other countries cancer is a considered public health problem. The current data mentioned that 1 in 4 deaths in the United States of America is by the reason of

cancer (Jemal, Siegel, Xu, & Ward, 2010). When we understand from the number of deaths due to cancer, the types of illness and the other factors have importance for the welfare of public health. EU and USA have slight changes in the order of intensity, yet breast, colorectal, lung, uterus corpus, cervix uteri, thyroid are observed as the most widespread types. As for the global average types of cancer, it is reported by the Turkish Public Health Institution Cancer Department that breast, colorectal, uterine cervix, lung, uterus corpus are the most common types of cancer (Turkish Public Health Institution, Cancer Department, 2014). As our study is directly related to cancer patients, these statistics could give us a better insight in the illness and how it affects the patient and the family system.

### **1.1.3. Methods of Cancer Treatment**

Early diagnosis is the most significant issue to be marked in the context of cancer treatment. Firstly, and most importantly, early diagnosis of cancer adds much to the positive completion and closure of treatment process.

Early diagnosis is the most significant issue to be marked in the context of cancer treatment. Firstly, and most importantly, early diagnosis of cancer adds much to the positive completion and closure of treatment process. Therefore, it is arguable that early diagnosis is vital for cancer treatment.

Other important elements of cancer screening and cancer screening interactions are awareness of cancer as a disease. Cancer is believed to be one of the most serious health problems that lead to death if it is not diagnosed and treated early. This makes the treatment of cancer even more vital.

There are a number of advancements in how cancer is treated, such as technological developments or rising standards of living. The most common methods used in the treatment of cancer are radiotherapy, chemotherapy and surgery.

Surgical methods are described as the removal of cancerous tissue from the body through surgical operation. Radiotherapy is the burning of cancerous cells through radiation tools. What is important in the treatment through radiotherapy is

the intensity of incineration on the target cells. Chemotherapy, on the other hand, is killing the cancerous cells by the means of drug use. In this method, the removal of correct mechanisms to divide the cancerous cells from the healthy ones is crucial. Chemotherapy aims to reach tumors as much as possible, and the progress of the treatment depends on that. It is vital to recognize the cancerous cells early and treat them using the most appropriate methods given above. It is also significant to keep up with the technological advancements as they would ease the process both the patients and the caregivers. Nanotechnology, for example, has been a milestone in cancer treatment. Consequently, cancer therapy and technology should go hand in hand (Sudhakar, 2009).

## **1.2. About Concepts of Caregiving**

### **1.2.1. Definition of Caregiver**

Etymologically, the word “care” stems from the Old English term “wicim”, which means “mental suffering, mourning, sorrow, or trouble” (Niles-Yokum, Wagner, 2010). The Merriam Webster dictionary (2019), defines care as “watchful or protective attention, caution, concern, prudence, or regard usually towards an action or situation”. Care is basically defined as providing one with the necessities for health, protection, welfare and maintenance. Care can be defined as the consequence of the associations between one’s experiences, cultures, and values (Altıok, Şengün & Üstün, 2011).

Caregiving refers to the actions or processes of aiding the person who suffers (Niles-Yokum, Wagner, 2010). The four basic elements of health care systems of the modern world are chronic care, acute care, palliative care, and preventive care (Corrigan & Adams, 2003). Providing the dependent or coping person with care at home by the family members has been accepted as a typical care model for ages. However, it is known by all societies that family members have burdens of multi-dimensional problems on their shoulders, and they need assistance (İnci & Erdem, 2006).

Giving care is comprehended by caregivers as a multiple process that cause problems along with the act of caregiving (Şahin & Ergüney, 2009). Thus, the definition of caregiver can be set as “the person approving the responsibility of satisfying the physical and affective needs of those who cannot meet their own physical needs Şahin (Şahin & Ergüney, 2009). In addition, taking the caregiver experience from the level of cultural and social differences, it can be suggested that Turkey has a unique definition of caregiving formed through overall family dynamics and intergenerational transmission. When it is necessary to care for a family member, it is seen that instead of getting help from a professional, the family uses its own internal resources and can act under the influence of the outside world in line with social values. In fact, another proof of this is the fact that the number of centers providing services such as elderly care house, palliative care and hospice is quite low in our country. Unfortunately, palliative care model, which emphasizes the participation of family in treatment process and the need for family therapists in the treatment of chronic diseases, is sadly neglected and has not been implemented enough in Turkey (Gideon et al., 2010). Similarly, in Turkey, there are no hospices in which radical treatments are stopped for patients in the last months of their lives, unnecessary medical interventions are terminated, the wishes of the patients and their family are taken into consideration, and the good death conditions are organized to enable the patients to say goodbye to their family and loved ones. According to the latest data announced by the Provincial Health Directorate, in Turkey, there are of 9 palliative care centers. Also, there are 72 pain treatment centers which actually has the basic features of palliative care centers. However, no hospices have been opened yet. These data show that the culture of home care and caregiving in family is more common in Turkey than in the world, and thus, has certain effects and reflections on the health system. It is clear in the definition of caregiving that the most significant cultural definition of caregiving in Turkey is the perception of tendency for being involved in the caregiving role dedicated to handling all kinds of responsibilities of the patient naturally without questioning. The best explanation of that situation would be “giving care is not only

a type of help, but also includes physical, spiritual and material support” (Atagün, Balaban, Atagün, Elagöz & Özpolat, 2011; İnci & Erdem, 2006).

#### **1.2.1.1.Types of Caregivers**

A caregiver could be a family member, friend, nurse, therapist or social worker and more. By approximation more than 15 million adults give care to family members, saving billions of dollars annually from the current formal health care system (Schulz & Quittner, 1998). According to Family Caregiver Alliance (2006), there are two types of caregivers; the first is called “informal caregiver” who is an unpaid individual from the patients’ close circle; and the second is called “formal caregiver” who is a paid care provider. Informal or unpaid caregivers are categorized as primary and secondary caregivers, community caregivers or future caregivers. National Alliance for Caregiving points out that %85 of people have the probability of abruptly being a caregiver, not even having an idea of how it would change their lives and what kind of responsibilities they would undertake (National Alliance for Caregiving and AARP, 2015).

A chronic illness has an important life changing effect on patients and his or her close environment, especially patient’s family. In the article of Weihs, Fisher and Baird’s (2002), chronic illness is reported to affect family system especially on commitment, conflict resolution system, relationship contentedness, consistency and organization. That being the case, a caregiver whether be a family member or not, should be aware of his or her roles including factors as a caregiver due to the fact that being a part of family system (FCA, 2019).

Informal caregivers, generally known as family caregiver, or carer in broad aspects, is the patient's relative who provide constant, unpaid and voluntary assistance to services during a physical or mental disability, disease and treatment process (National Research Council, 2008). The number of persons diagnosed with cancer has increased, and the treatment methods and techniques have been developed and modernized, and thus the life expectancy of the patient has been

extended. Consequently, family members have been involved in sharing responsibility of caregiving to cancer patients (Orak & Sezgin, 2015).

In Turkey, care of the patient is usually given by family members simply because this is perceived as an obligatory responsibility. In fact, being a caregiver is neither an option nor a planned action. Just like cancer as an unexpected disease, caregiving is also an uncertain, sudden and unforeseen (Eicher & Batshaw, 1993). Another perspective that we can categorize family caregivers is according to where they give care. They can give care to patients in various locations. At hospitals, inpatient and outpatient services are two most frequent places to give care. Places of inpatient services for cancer vary as chemotherapy services, palliative care services, hospices, and acute pain treatment services. Palliative care and hospice services provide both the patient and the family caregivers with support programs emphasizing the active participation in the treatment process (Gültekin, M., Özgül, N., Olcayto, E., & Tuncer, A. M., 2010).

Being a formal or paid caregiver, which is sometimes called a working caregiver, involves different professional positions such as certified and non-certified caregivers, nurses, therapists and so on. Informal caregivers those who are not paid to provide care; whereas, formal caregivers are paid to give care. With a broader aspect, formal caregiver can be defined as a provider of health service associated with a formal service system, so, the caregiver can be either a paid or a volunteer. In recently updated online resources, formal caregivers are defined with a focus of licenced healthcare professionals at home in accordance with the orders and instructions given by a doctor (Interim HealthCare Inc., 2017). On the other hand, formal caregivers can offer their service at home as professionals without a healthcare focus, as companion, aide, or homemaker.

### **1.2.2. What is Caregiver Burden?**

Caregiver burden is described as the negative objective and subjective consequences such as physical and health problems, physiological problems, economic problems, social problems, deterioration of family relations, and the

feeling of not having the control, which, in fact, happen as a result of the care undertaken by the caregiver. Through the eyes of the ones who give care within their family, it is frequently observed that they suffer from a lot of physical, social, economic problems during the disease and treatment period (Orak & Sezgin, 2015). Due to the fact that the caregiving process is usually undertaken as a multiple experience by the caregivers (Toseland, McCallion, Smith, Huck, Bourgeois & Garstka, 2001), it affects the caregiver burden in different ways. Caregiver burden can be divided into two, subjective burden and objective burden. Although there are certain behaviours towards the process of caregiving or emotional reactions of the person undertaking the care in personal burden, there changes and dimensions of problems in various ways and parts of lives of family members and caregiver's objective burden (Uğur, 2006).

While caregiver burden is an undeniable experience, Anderson and White (2018), highlight that being a caregiver can also generate positive rewards such as gratitude for the support from social relationships and for time spent with the person cared for, a sense of accomplishment and mastery through learning and adaptations and closer personal relationships. Moreover, Ross, Holiman and Dixon (2003) highlight that benefits of caregiving include developing more meaningful and indepth relationships.

### **1.2.3. Caregivers' Conditions and Needs During the Treatment Process**

The work of giving and taking care of the patient gradually becomes a sort of commitment that forces the caregiver to have a more difficult life, which is usually dependant, intense and a long process, and these all cause adjustment and adaptation issues among various roles and profiles of the caregivers such as family relations, work, leisure and social life, and ultimately, the caregiving. The existing literature so far mostly focused on negative impacts of caregiving; losses and difficulties the experience created on the person's live. Thus, research findings paint a grim picture. During the psychotherapy process of the caregiver's, it could be observed that anxiety and depressive symptoms rise drastically, and they eventually cause the caregiver to get more difficulties (Erdoğan & Yavuz, 2014).

What's more, in comparison to the general population, the caregivers can have more physiological, behavioral and physical maladies and can encounter more early deaths (Bevans & Sternberg, 2012; Oberoi, White, Jefford, Giles, Bolton, Davis & Kay, 2016). Caregivers are not always educated, or they may sometimes have less information and sources in this process (Van Ryn, Sanders, Kahn, Van Houtven, Griffin, Martin & Rowland, 2011). This may prevent the caregivers from meeting their own needs during the caring of cancer. The negative effects of this lack of education could be decreased through supports during the caregiving. Having plenty of information about the process and getting emotional support from health professionals in different stages of cancer plays a vital role (Morasso, Capelli, Viterbori, Di Leo, Alberisio, Costantini & Tirelli, 1999). Care givers would definitely need guidance and surveillance, getting social supports, pursuing, earlier anticipation, commenting, making decisions, defending, coordinating and problem-solving abilities (Schumacher, Stewart, Archbold, Dodd & Dibble, 2000). Moreover, WHO recommended below-average-income countries to adopt programs to control cancer into their available health systems as well as establishing programs in order to utilize resources as efficiently as possible. This would also make it feasible to diagnose the illness earlier and the cure would also be based on the evidence (Bodur, Borman, Alper & Keskin, 2011).

The needs for supportive care for the caregivers could be different. To put it another way, it involves behaving towards the physical consequences of the illness and fighting against the physiological and psychosocial circumstances such as anxiety and depression (Harrison, Young, Price, Butow, & Solomon, 2009). In oncology, supportive care is helping the patients and their family in taking care of the situation even before they received diagnosis of cancer at the hospital, and it inevitably continues during the diagnosis and treatment, recovery or palliative services of the illness. Meanwhile, it includes the health services and activities that promote maximization of the benefits of the treatment process, experience a lifestyle as high quality as possible despite the effects of the illness (Yıldırım, Okanlı, Karabulutlu, Karahisar & Ozkan, 2013; Sklenarova, Krümpelmann, Haun, Friederich, Huber, Thomas & Hartmann, 2015). Cancer patients and caregivers'

need of support is usually around the average through the recovery of the illness and during the treatment. In consequence of this, the service effective and high-quality cancer care is not only bounded to giving the anti-cancer treatment (Schofield, Jannin & Salvatella, 2006). Finding out the supportive care needs of patients and caregivers would decrease the stress of the illness and dissatisfaction to be received from caring, extend the living standards and minimize the rise in health costs (Maguire & Carson, 2013). Current evidences point out that caregivers must be informed about supportive needs of the patients, emotional, spiritual, physical and professional caring in the field of cancer (Girgis, Lambert & Lecathelinais, 2011). It is important for the caregivers to have enough, constant and periodic education (Okçin, 2015).

Caregivers don't usually pay much attention to their own physical and emotional needs during the phase of giving care to the patients of cancer. Furthermore, they may not be able to meet their own responsibilities to a great extent (Bektaş & Akdemir, 2006). Ross, Dixon and Holliman (2003) investigated the factors that helped caregivers to manage stress highlighted the importance of talking with friends, exercise, having a religious faith and having hobbies. Bektaş and Akdemir (2006) offers that in order to protect their health in the process, caregivers do have options : being active, caring about their diet, having enough sleep and rest, giving breaks, checking health regularly, being aware of the limits, keeping a journal, calling friends and family members, prospering the spirit, receiving help from health experts about emotion and anxiety, attending the support groups for caregivers, keeping in touch with friends and relatives, being informed about caregiver programs and being acquainted with his or her own rights (Bektaş & Akdemir, 2006).

The level of difficulty caregivers has in caregiving process may vary although not all the caregivers suffer from such difficulties. Caregiver burden is affected by a number of factors such as personality qualities, mostly demography, of the caregiver (gender, age, employment status, education level, perception of his/her own health, religious belief, ethnic roots, perception of giving care, cultural level, socio-economic status), the quality of the affiliation with the patient before and

during the caregiving. Further significant factors are sharing the house with patient and long duration of caregiving, having emotional uncertainty, asking advice about thoughts on how to decide about the caregiving, having health problems or being over-aged, having further duties than caregiving, intervention of patient into caregiver's life, the patient's being addicted during the caregiving process, lack of space for a separate room for the patient due to financial difficulties, having social discomfort in case the family has moved from rural into urban areas, lack of support person to accompany the patient in case the women is studying or working for financial difficulties, and obligation to give care in various fields and aspects: physical, financial, affectional, transport, lack of health services, lack of support for caregiving (Bilgili & Kubilay, 2000; Erdem, 2005; İnci & Erdem, 2008, Shumaker & Hill, 1991; Yaşar, 2008). ). In addition, it is reported that there are a number of factors influencing the level of difficulty that the caregivers deal with: how old the patient is, what type of treatment is applied, what functions the patient can use, how long the illness lasts, how old the caregiver is, what gender the caregiver is, what level of education the caregiver has, and whether they can get support from other relatives (Zaybak, Güneş, İsmailoğlu & Ülker, 2012; Akgün Şahin, Polat & Ergüney, 2009; Karabuğa-Yakar & Pınar, 2013; Orak Sezgin, 2015).

Thanks to the developments in technology through the last century, health sector has taken significant milestones and the ways the patients have been treated have changed to a great extent. Although life expectancy has prolonged, the risk of having a chronic illness has risen due to increased urban and industrialized lifestyles. In consequence of these chronic illnesses, people started to lose control over themselves, their personality and relations and this gave rise to the necessities of care and support (Duyan, 2003). Bearing this in mind, caregivers basically comprehend care as a multiple process. A family member's having cancer influence the life of the whole family. Apart from anxiety and despair about the family member with cancer, the situation causes emotional problems (Hudson and Payne, 2009). It also gives further duties and roles to the caregivers, who are, in fact, family members or relatives. In addition to the consequences of the disease on business and social life, caregivers need to take care of the extra costs and expenditures as

well (Applebaum & Breitbart, 2013). Family members are to be involved in all stages of the physical, emotional, social, moral and economic treatment for someone who is diagnosed with cancer. Caregiving process may alter to caregiving burden as a range of responsibilities and duties add to the continuous and excessive characteristics of caregiving (Şahin & Ergüney, 2015)

Caregivers are at a great risk of having serious illnesses. Studies have shown that a significant number of caregivers tend to have negative effects on their health such as having too much too much caregiving demands, having high chronic stress due to caregiving, and suffering from psychological compensation (Schulz & Beach, 1999). Most family caregivers offer their service at high amounts of costs to themselves (Schulz, O'Brien, Bookwala & Fleissner, 1995). It is mostly agreed that giving care to a cancer patient receives a lot of burden and high stress, and this results in psychiatric disorder (Vitaliano, 1997). Caregivers' depression and perceived burden increase as patients' functional status declines. Strategies are needed to help reduce the psychosocial, occupational and economic burden associated with caregiving (Grunfeld, Coyle, Whelan, Clinch, Reyno, Earle & Glossop, 2004).

#### **1.2.4. Caregiving for Patients' Coping with Cancer**

In the literature, the concept of burden is explained as the negative objective and subjective effects resulting from the caregiving process, such as caregiver's caregiving, psychological problems, physical health problems, economic problems, social problems, deterioration of family relationships and feeling that he or she does not have control (Uğur & Fadiloğlu, 2006).

In most cases, cancer patients receive care from family members during and after the treatment (Segrin, Badger, Dorros, Meek & Lopez, 2007; Braun, Scholz, Bailey, Perren, Hornung & Martin, 2009). Caregiver is the key to the processes of treatment and the caregiving (Yıldız, Dedeli & Pakyüz, 2016). In Turkey, caregiving is perceived as a duty of family members (Orak & Sezgin, 2015). The cultural environment of family teaches how to give care (Bektaş & Akdemir, 2006).

The role of the caregiver has been more and more difficult due to dynamic economic and cultural conditions such as educational background, profession and social status. Nevertheless, family members play a vital role in caregiving of which responsibilities are basically fulfilling the physical needs like showering, doing the household activities, dealing with technical and medical work such as altering the ostomy bag, escort the patient to hospital services (Zarit, 2004; Given, Sherwood & Given, 2011; Maguire et al., 2013).

In the World Health Organization Assembly held in 2005, it was recommended in especially in low- and middle-income countries to uphold with WHO objectives in growing countries so that the number of deaths due to cancer would decline, and thus the standards of living that the people diagnosed with cancer and their families could be raised. Giving the needed help, support and concern to the patient through the everlasting duration, assisting the patient for his or her needs, and providing consistent support at daily basis have all become a full-time profession (Girgis & Lambert, 2009). It is claimed, on the other hand, that caregivers experience unemployment when the time allotted to caregiving are completed. In conclusion, the caregiver burden is fundamental in cancer, and it inevitably influences the living standards of persons.

#### **1.2.5. The Relationship between Cancer and Caregiver Burden**

Cancer, due to its nature of affecting the quality of life, is a chronic disease that causes the burden to boost both for the caregiver and the patient. The perplexing duties and tasks that a caregiver for a person diagnosed with cancer are to apply the medical treatment, to make sure of the patient's comfort, to trace and observe the symptoms, to make decisions towards solving the problems, to coordinate the caring process, to provide the patient with emotional support, to ensure security, to organize the secure surroundings for the best functioning of the patient, and to serve appropriate equipment. As they carry out all those supporting roles given above, caregivers may experience high level of stress due to unexpectedness to the presence of a patient at home. It has been reported that what cause stress most

through these situations are increased level of caregiver burden, changes in the dynamics in the family, deteriorations in financial and social status of the family, intense and frequent symptoms of the patient, and ultimate effects all on the family roles (Yıldız et al., 2016).

Factor such as gender, age, education background, beliefs, and race of the caregiver as well as the degree of relation to the patient, whether being voluntary or professional, the level of self-sufficiency, whether having chronic illness or not, getting social support, capability of dissolving problems, financial capacity and economic status, level of knowledge and the culture of the society, each and all, have great influence on physical and psychological situation the patients (Bayramova, 2008). What's important in determining the caregiver burden is, as listed above, the factors that belong to the caregiver. In fact, they play a vital role in the treatment of the patient (Bayramova, 2008). Moreover, there are various negative effects of cancer on the patients and their families in terms of their psychology, physical well-being and social situations. They, eventually, lead to high amounts of costs to the family and the society as a whole. It is reported that adverse effects of cancer have been on rise in recent years. Consequently, how the patients lead their lives and what they expect from life are initially influenced, followed by negative effects on the whole family. This is a major threat to the living quality of the patient and his or her family (Fadıloğlu, 2003). The more problems encountered by the caregiver, the more seriously is the patient dependant on the caregiving. Burnout of the family members giving care as well as physical and psychological problems is the ultimate result of the whole process. (Afşar, 2010).

Studies have shown that approximately 40% of the caregivers demonstrate depressive symptoms while about 20% of them encounter anxiety, and even more, the level of anxiety is much higher in female caregivers (Fridriksdottir, Saevarsdottir & Halfdanardottir Svandis., 2011). In a research study carried out by Karabuğa-Yakar and his/her colleagues (2013), it was concluded that caregivers to cancer patients are apt to have health disorders; in addition, nearly %30 of them have problems in their work lives, and approximately %50 of them find it highly difficult to maintain their marriage. It was also suggested that family caregivers'

quality of living standards gets too low, emphasizing that caregivers are inclined to have low levels of living standards especially if they are giving care to male patients, having financial difficulties, not able to meet the basic needs of the family duties due to already being busy giving care, and most significantly, not getting support from other family members (Karabuğa-Yakar & Pınar, 2013).

### **1.3. Theoretical Perspectives**

#### **1.3.1. BPS Approach**

Asklepions, which were indeed the first hospitals in the history, were among the most significant medical breakthrough of the Ancient Greek Period. According to Pausanias, the first Asklepios Temple was built in Bergama in the midst of 400 BC. As described in Hieroi Logoi by Aelius Aristides, these hospitals, or temples, were places where not only medical treatments but also some soul-healing methods that would be inspired from arts and social life. The healing of ripple of water flowing through aqueducts, amphitheater areas, the power of architecture and art that would integrate the patients with social life were a few examples used in treatment of illnesses. Integrated approach, rooting back to Ancient Greek society, is a combination of biomedical and biopsychosocial. Although it has been perceived differently by scientists, today, it is entitled in the terminology of modern medicine and psychology. Having a great impact in the treatment processes in modern times, biopsychosocial approach is required to be reviewed from a historical perspective.

Examining the historical development of biopsychosocial model, one could realize that it goes back to Greek times with two theories applied in medical schools in Kos and Knidos. These schools approached the illness taking all the surroundings of the patient into consideration, and protocols included into treatment fostered the patient to overcome the disease on his own. The work of the physician was not barely to heal, but also classify and find an original medicine or technique for the illness (McWhinney & Thomas, 2012). Through the developments in medicine thanks to technology and science, however, more focus was given on biomedical model as the basis of medical education turned to excel teaching of medical tools;

however, it lacks focus on the personal aspects of the patient and does not involve the patient's own story (Şen, 2013). Due to the fact that family doctors were given trainings appropriate to biomedical model, they found out that many patient's illness lacked diagnostic criteria and the actual problem resulted from the disturbance of daily life issues and emotional anxiety.

The first steps towards changing the medical model were taken by a group of family doctors with Michael Balint, who combined psychoanalysis and medicine approaching the patients' problems. Balint influenced the concept and applications of family medicine to a great extent through his book titled *Physician, Disease and Discomfort* and a series of follow-up seminars based on that. Such efforts are taken as the outset for the separation of family model and biomedical model that was the only and absolutely valid one at that time. In spite of the impacts on family medicine, doctrines expressed by Balint had almost no effects on medical doctors (McWhinney & Thomas, 2012; Şen, 2013).

In 1970s, biopsychosocial model was identified by Engel on the basis of the general system theory of Von Bertalanffy, and he emphasized that the model would accomplish with the lacking aspects of biomedical model (Uncu & Akman, 2004). Engel was the one who pioneered and disseminated the biopsychosocial model. What Engel suggests is basically the demand that scholars and advocates of biopsychosocial model which perceives all natural systems, from individuals as the smallest elements to family and society, within a complicated and interactive biological, psychological and social relations network, should systematically approach to the psychological and social factors that would affect the state of health, and this should be done in the light of information based on social sciences (Engel, 1977;1980). Just as all the illnesses being evaluated in consideration of biological systems, all the factors should be considered holistically as a part of the whole system.

One of the biggest drawbacks of biomedical model is the lack of individual aspects. The biomedical model does not depend on the individual for the fundamental characteristics, the basic psychological and social qualities. So as to make a meaningful relation among the biomedical model, the standardization and

the mind-body combination, it has to be scale down initially (Engel, 1977; Engel, 1978). As a result, such medical practices could be perceived as art beyond science, says Engel (Engel, 1980). Through the 21st century, biopsychosocial model seems to be a sign for some people, but it will be a big scream for the medical spirit.

Biopsychosocial model has proven to be on the most significant advancements of psychiatry and medicine sectors especially after 1950s. This model has provided the medical training, medical practice and research studies with great benefits. Ian McWhinney made some progress over Engel's model in 1986. He underlined that clinical applications and methods ought to be patient-centred. In his mind, in compliance with the patient-centred approach, doctors are the ones who involve in the patients' lives and affirm the illness through eyewitness with a perspective of the patient himself or herself (Şen, 2013).

One of the main differentiations that could be offered to define biopsychosocial model is the fact that it approaches the patients far more than a passive caretaker role: as an active collaborator and an associate stakeholder who is acquainted and ascendant in terms of patient rights. This essential characteristic makes biopsychosocial model holistic rather than reductive, and thus puts the patient in a position where he or she actively participates in the treatment process (Engel, 1977). It wouldn't be a facile claim when it is stated that biopsychosocial model approaches the individual as a whole at all points. Patients usually make sense of life through reciprocal interaction of social, psychological, and biological impacts (Uncu & Akman, 2004). As the biopsychosocial model is far more than just being integral, it emphasizes the fact that highly complex interactions of those different scopes of human function stimulate significant proceedings in life (Bozdemir & Kara, 2010). George Engel suggested that it is not enough to collect information only the structural and psychological aspects of the patient's illness and health. To be able to find out and grasp the patient's grievance, the patient's social and economic status, family background, education, beliefs, likes and dislikes are each and all to be known. So as to get a broader perspective of biopsychosocial model, a combined assessment of social, psychological and biological conditions should be understood and assessed all together properly. Apart from these, how the

patient identifies himself or herself in the relationship, how he or she maintain the process or complicated treatment are also vital to this model (McDaniel, 2003).

The holistic effect of the three domains are clear because the situations of health and illness are influenced by each and all of psychological, social and biological parameters. From this perspective, to be able to figure out the disease as a whole, we have to recognise the social environment and cultural atmosphere as well as apprehending the origins of the psychological circumstances, together with the knowledge of biochemical and genetic structure of the disorder or illness in the society. Then we can give an explanation through biopsychosocial approach on why it is called “disease” by some patients and “vital problem” by others. This is simply because biopsychosocial approach evaluates and takes into consideration each and every factor that gives rise the illness or the disease. It doesn’t deal with only the biological factors initially (Cunnigham & Edmonds, 2005).

The biopsychosocial model is based on the assumptions that the brain and peripheral organs are sensitive to social changes such as physical stimulation, and thus they are interrelated. Considering the psychological and social factors as well as the biological ones first and foremost makes it possible to understand the diseases completely because health and disease are formed and affected by the complicated and miscellaneous interactions of biological, psychological, and social factors none of which can be categorized separately (Rakel, 2011). Engel always warned doctors to evaluate their patients’ biological, psychological, and social data thoroughly, and he advised them to approach clinical problems with this perspective (Rakel, 2011). Engel basically argued that there is a systemic interaction among biological, psychological, and social factors, and this affects the formation and occurrence of almost all diseases (Uncu & Akman, 2004). Engel tried to draw the attention of clinicians and physicians to the fact that illnesses can differentiate morphologically and biochemically with the alterations in the patient’s social environment, emotional structures, life goals, behaviors when they experience the disease. As the diseases could only be understood entirely when psychological and social factors are taken into consideration, biopsychosocial model suggests that the clinical applications require much more than only biological medicine (Engel, 1980).

Furthermore, the significance of physical as well as emotional contact is emphasized. A great deal of emphasis is also given to stress on preventable diseases through behavioral changes such as cancer, chronic lung diseases, cardiovascular diseases (Şen, 2013).

There is considerable amount of empirical evidence demonstrating that the stress of giving long-term in-home care for a relative is associated with sacrificed mental health functioning. It is observed that family caregivers are generally more depressed in the general population (Haley, Levine, Brown, Berry, and Hughes 1987). It is reported that family caregivers suffer from emotional strain in terms of higher levels of depression, anger, and anxiety (Anthony-Bergstone, Zarit, and Gatz 1988; Friss and Whitlatch 1991; Gallagher, Rose, Rivera, Lovett, and Thompson 1989).

Nowadays, stress is conceived as an endemic phenomenon. As we experience a lot of stress through the daily life, we are under extreme pressure, we feel compelled, and most interestingly, we think that these are all uncontrollable. In some patients, somatic complaints are observed due to their changing feelings (Uncu & Akman, 2004). In fact, a specific and peculiar disease has not been proven to occur due to stressful life experiences. However, sensitivity towards a disease can change in accordance with the emotions. Thus, the effects of psychological factors on the neuroendocrine and immune systems have become the focus as an organic reflection of the circumstances. Individuals usually have more deteriorated health, and serious health problems such as impairment of the immune system and aging may increase in the individuals who are already immunocompromised if they experience stressful life situations or if they are psychologically sensitive and fragile (Graham, Christian & Kiecolt-Glaser, 2006). When young people are compared to the elderly, a strong relationship between the health status and emotional factors has been shown in a number of studies (Scheier & Bridges, 1995). Immune functions are observed to be suppressed in those people: the widow, the divorced, the family members who give care to a patient of Alzheimer's disease, and the students who have huge amount of academic stress (Graham, Christian & Kiecolt-Glaser, 2006). There have been a series of studies suggesting that apart

from the evidence of social factors and effects of stress, personality traits and feelings affect the progression and outcome of certain diseases. Depression, anger, hatred, and worsening of the prognosis of coronary heart disease. There are also some proofs that links coronary heart disease or breast cancer to the case of emotional pressure. It can be suggested with such new evidences that pessimism and fatalism can be associated with severe conditions in AIDS, cancer, and coronary heart disease (Scheier & Bridges, 1995). In many patients, stress is resulted in biomedical dysfunction, or biomedical dysfunction. The patient who comes to see the doctor sometimes does not have tolerance to the symptoms, or he or she has high level of anxiety due to these symptoms. The patient's recovery and findings in one way or another are all affected by how the patient can deal with the stressful situation resulting from his/her problem (Uncu & Akman, 2004). There is a series of studies showing that increasing the level of confidence in patients before the operation can shorten the post-operative healing period. It is shown in a study on cancer patients that patients who achieves an important life change after psychotherapy, such as psychological aspects of recovery, survives longer than the oncologists could predict (Cunnigham & Edmonds, 2005). A doctor ought to consider the possible effects of the patient's stress on the problem if he or she aims to be able to treat the patient successfully (Uncu & Akman, 2004). In that matter, family doctors have high level of responsibility. The health of the patients could be improved and the overall resistance, like other supportive treatments could be increased when support is given by the family doctor who has a cognitive approach together with support, and this could increase the possible supports the family members of the patient are likely to give. Other important source of support and care are the family members in the inner circle. All of these reconciliation attempts work not only through a specific disease case or illness agent, but also by giving care to the patient in order to improve and strengthen his or her resistance to harmful stimuli, supporting the patient in the ability to cope, and playing an active role in treatment process (Cassel, 1976).

Biopsychosocial model is usually expressed in clinical practice through patient-centered clinical methods (Şen, 2013). The patient-centered clinical method

was first brought forward by Levenstein in 1986 (Brown, Stewart, McCracken, McWhinney & Levenstein., 1986; Stewart et al., 1986) and it was offered by Ian R. McWhinney, who focused on the need of clinical practice that should be patient-centered rather than physician-centered, in accordance with Engel's demand to create a new model. The fundamental of the patient-centered approach was that the physician involves in the patient's life and witnesses the illness in the eyes of the patient (McWhinney & Freeman, 2009). Family physicians are supposed to be interested in treatment of the patient as a whole with a patient-centered approach. They took account of the individual in accordance with life story, physical environment, problems, and the family. However, in the disease-centered approach, the doctors engage in only the disease, constitute an authority on the patient to control abnormal biomedical implications and evaluate the disease within his pathological references by judging the patient's disease into his or her own world (McWhinney & Freeman, 2009). In that sense, the doctor-centered (disease-centered) clinical method is opposite to patient-centered clinical method. It lets the patient's problems to be identified by the patient's point of view and to establish the priorities and roles in the management of the disease period by working hand in hand with the patient. Still and all, the doctor-centered method is perceived as more attractive for many physicians. A study suggests that 90% of the 1850 interviewees were in favor of physician-centered (Byrne & Long, 1976).

The patient-centered model proposed by Levenstein consists of six steps (Levenstein et al., 1986). The first step is to understand humans as a whole. In this step he mentioned the physician must evaluate human beings as an "individual" (personal situations, developmental and life story) and the environment as a whole. In most clinical situations, the patient's physical environment, the family or anyone affected by the patient's condition are all withheld. The doctor should keep in mind that the difficulties including his family, his beliefs, his work and various crises in his life would vary. As a result, the doctor who can completely understand the person can actually make a difference in the effects of family members in the treatment process, acuteness, and the genesis of the illness (Uncu & Akman, 2004).

The second step is investigating both disease and illness. It says doctors need to understand the two basic concepts of patient health: "discomfort" and "sickness". Discomfort is a theoretical structure, situation and abstract. Discomfort is the patient's experience occurring because of his or her physical or mental disorder. The physician should make a differential diagnosis in the clinical approach and consider and examine the dimensions of the disease in regards with the patient's feelings, ideas, anticipations, and function as well (McWhinney & Thomas, 2012).

The third step is finding a common ground for the treatment of the disease. It means a significant point in the patient-centred approach is finding a common ground for the patient to treat (Levenstein et al., 1986). The doctor and the patient have to agree on three main points so as to develop an effective management plan. The first thing to decide on is the nature of the problems and its priorities, the second is the main goal of the treatment and the third is the physician and the patient's role. In general, physicians and patients have very different perspectives in these points (Stewart et al., 2003). The physician's treatment proposals and anticipations do not always agree with the patient (Levenstein et al., 1986). The process of finding a satisfactory solution actually means building a common ground instead of a negotiation (Stewart et al., 2003). Involving the patient into the decision-making process and trying to find a common ground together would increase the treatment compliance and prevent the possible future conflicts as well (Levenstein et al., 1986). Within this frame, the thoughts, expectations, feelings, and functions of the patients should be included in the treatment plan (Stewart et al., 2003).

The fourth step is to include preventive and curative treatments for the improvement of health. Medical practices are known for being examined in four stages in the sense of protection (Levenstein et al., 1986). First is to put efforts to protect and improve the individual's health. Second is to reduce the risks of the ones who are under risk of disease. Third is to diagnose the disease of the patient early. Fourth is to study for reduction of possible complications of the patients who are impossible to be protected. The doctor is supposed to conduct the treatment in

accordance with these four steps while examining the patient. Also, especially the first and the second steps necessitate special attention while giving the initial care.

The fifth step is to be realistic. The doctor should be realistic in the sense of timing, managing resources, leading the team and making use of the facilities. It must be kept in mind that the primary goal of giving healthcare is to provide the patient with the best service doable and do that to the greatest level possible. Meanwhile, healthcare professionals should bear in mind the whole community through making use the facilities (Levenstein et al., 1986).

The sixth and the last step is to develop the relationship between the parent and the doctor. The interview with the patient offers is a great chance to make the mutual relationships stronger. In regards with the possible contacts with the individuals in the community, doctors have much bigger advantages than other jobs. Everyone receives some level of treatment around six times yearly. As doctors have interviews with all these people so many times, it is quite easy for them to collect huge amounts of information, which would give them a great opportunity to manage the future problems of other patients. Doctors deal with the difficulties of building a strong, long-term relationship with patients during each and every visit. This is vital for continuation of the treatment process. Joint effort given by the patient and doctor together makes the foundation of healing potentials. In a way, patient-doctor relationship paves the way for a successful healing process by approaching the patient correctly. That's how the doctor take actions towards the patient's strengths (Şen, 2013). Such interactions would definitely offer further healing strains, which eventually develop the mutual relationships. It is frequently observed that people seem to relieve and feel at ease simply by having an interview with the doctor.

Smilkstein (1978) adapted the systemic approach to family medicine in order to better observe the interaction of family members with each other, to see the functionality of the family, and to examine the resources and skills of coping with the crisis more closely. One of the main sources of this is that most diseases cannot be understood without considering the family, social conditions and characteristics of the individual. The biopsychosocial approach takes the person

together with his or her family and environment and is based on the physical, mental and social well-being. This makes it difficult to understand cancer as a chronic disease unless the caregivers of the patient are included. In addition, this model focusing on the disease that affects the whole family system has an emphasis on the biological, psychological and social problems caused for the caregiver. Smilkstein's (1978) model for family medicine and clinicians aims to make family members, especially caregivers, more effective and more visible in the treatment process through adaptation, partner, growth, affection and resolve. Therefore, it is useful to examine the approach of the physician and clinicians to the patient and to look at the role of the caregiver from this perspective.

On the other hand, according to biopsychosocial approach, psychosocial parameters as well as biological parameters are emphasized during the treatment. There are possible reactions at that point. The community appreciates what the donor does if the recipient gets better quickly. Similarly, healing phase of the patient become faster and smoother provided that the donor believes his or her organ will recover quickly and function properly. However, if the donor is not appreciated much and thus feels that he is not caught on, it is likely to take more time and have more problems for the patient through the healing. Only sufficient post-surgical care to the kidney donor would be enough, so there is no urgent demand for another biological interference. Yet, biopsychosocial approach suggests that that patient can acquire various approaches and feel much better, which would expedite the treatment and healing. In this occasion, it is necessary for the patient to feel that he or she has biological integrity. This could be done a series of trainings on renal function, especially in terms of physiology. Achievements and possible changes in the recipient's life are advised to be given emphasis, which means his or her self-esteem to be supported. Furthermore, family and community support should be given to the patient through the treatment (McDaniel, 2003).

### **1.3.1.1. Medical Family Therapy and Systems Theory**

Systems theory is medically defined as a holistic concept through which the human patient is perceived as an integrated sophisticated structure of bare systems, but not partly independent pieces. The healthcare perspective of this theory involves the complex interaction of family, community, and cultural factors, possible effects of which should be taken into consideration while diagnosing and treating the patient (Mosby's Medical Dictionary, 8th edition, 2009).

Systemic family therapy was first developed in 1950s and introduced by British anthropologist Gregory Bateson, who was the first person to explain the interfamilial processes by combining cybernetic concepts with general concepts theory. Family cybernetics studies the function of complicated systems with a specific purpose, processes within the system, feedbacks among the members of system, and circularity. It suggests that the family relations patterns are the foundation, and each individual should be approached together with this circular relation. This is because of conceding that the individual is influenced by the ones who are interacting with him or her. Family, where the individual is interacting with one another, is perceived as a system by this theory which actually puts account of biology, sociology and psychoanalysis. Thus, systemic family therapy generally focuses primarily on interfamilial dynamics. It takes the problem as of the family's rather than the individuals. As it gives credence to potential of the individual, this theory conveys common values through humanist therapies. It is tried to reveal the potentials and strengths of the client.

Systems theory emerged in the 1940s. The pioneers of family therapy were Gregory Bateson, Jay Haley, John Weakland, and William Fry, Don Jackson, Murray Bowen, Virginia Satir, and the Milan team. The term "systemic therapy" was, however, used first by the Milan team. Basic concepts of systemic theory were based on general systems theory, cybernetics and information theory. According to the Milan approach, it is believed that psychological problems cause not intrapsychic but interpersonal problems.

The case and its medium comprise a mutual and continuous relationship between the organism and its environment. In short, the symptoms appearing in the family members is, in fact, the symptom of the system. The aim of systemic family therapy, therefore, is not to directly remove the symptom but to find out the connections, to recognize the circles within the system and to understand what the reason for existence under such circumstances and what they serve to.

The principle of core family therapy has a perspective of a system that takes each individual and his or her connections with others instead of an exact number of people in his or her family through the treatment room (Doherty & McDaniel, 2010). Family therapy turns approaches and treatment methods together, thanks to which, sometimes-hypothetical nature of general systems theory and the biopsychosocial model are turned into terms that can be implemented in everyday practice. Applied within an awareness of all levels of the hierarchy, fundamentals of family therapy make up the basic perspectives of medical family therapy in case it is practiced with the consciousness of the whole steps of biopsychosocial hierarchy.

The model within the biopsychosocial approach combining the family systems theory and the therapeutic implications accompanying the treatment process of illnesses is called medical family therapy which suggests that the clinical practices should be applied not only for the patient but also the family as well. Just like biopsychosocial approach, this model holds that the family must be included in the processes like an individual. That's why it is emphasized that family members should be supported both physiologically and psychosocially (McDaniel, 1992; Pisani & McDaniel, 2005). While subjectivity and participation are two major elements for the patient to be carried through, McDaniel and Pisani puts the same amount of stress on the family as well. Subjectivity means the initiative taken by the patient in order to ensure his or her health and treatment; whereas, participation defines family, friends and social circle through the perspective of the significance emotional and psychosocial connections. It is herein emphasized that the caregivers and the circle accompanying during the treatment is highly important, and it becomes distinguished once again through the treatment process. The role of the

caregiver which is generally undertaken by family members and inner circles is located in a vital point during the treatment of the illness. Together with the responsibility's concomitant with the participation and companion, there occurs markable changes in the life of the caregiver. How the family as a system makes sense of the process, how the changes experienced in the family dynamics influence both the patient and his or her relatives have a significant place in the treatment process. Through the interviews made with hospitalist and inpatient treatment supervisors working in state and private hospitals, it was reported that the ones giving care to patients of chronic illnesses and accompanying their treatment process were generally family members, and that the patient was accompanied by the family members in turns.

Kadriye Peker, who is the head nurse and general director of Bahçelievler MedicalPark Hospital Nursing Services, reported that, through her experience in hospital service for 29 years, the ones giving care and accompanying to child patients are generally the mothers; but, for the adult services it is usually the spouse if the patient is married and provided that there is one who is available for giving care; and in case of other relationships, however, the caregiver would be one of the immediate family members (K. Peker, personal communication, January 5, 2019). On the other hand, in the interview made with Şenay Gelir, the manager of İstinye University Hospital Patient Care and Nursing Services with her 20-year experience in the sector, it was reported that problems were confronted in the proceeding of the treatment and crisis management if sufficient care to cope with the illness is not given together with the family members. This interview emphasized that illness has a direct impact on the family (Ş. Gelir, personal communication, January 12, 2019).

In the light of the interviews and the information given in the literature, it is clearly conceived that providing psychological support to the relatives of the patients receiving treatments for a chronic illness. This psychological support should be during the whole treatment process and it should target the quality of the time spent in the in-patient services or ambulatory care. At this point, the arguments justified in the medical family therapy are not doubt facts as they suggest that the patient and whatever gained from the family system influence the whole system.

Medical family therapy is framed with disciplines underlying the biopsychosocial model by including the family, health system, caregiver burden, relational circles, and the meaning and place of the patient in the system rather than a reductive treatment approach focusing only on the patient. Because the burden of caregivers is a concept used to express the physical, psycho-social and material reactions that can be experienced while providing care to the individual struggling with the disease (Atagün et al, 2011). In particular, differences in the social life, culture, health care system and family dynamics are among the factors that can directly influence one's conditions of care. This systematically explains the relationship between the family system and the caregiver burden, and clearly demonstrates the importance of the interaction of caregiver burden with the process in the course of the disease.

Medical family therapy services, as Pisani and McDaniel (2005) mentions, are given in medical institutions and mostly hospitals doctors by doctors who lack trainings on therapy although they have a lot of psychosocial support skills, so they carried out this service in cooperation with therapists. The main goal of medical family therapy is to accompany the treatment process by concurrently understanding the psychosocial conditions and systemic dynamics of the patients, and medical processes of the illness as well. While the patient implies the active roles and responsibilities to ensure his or her own health and well-being, including the family, social circles, friends and their experiences in the system makes it possible to realize two aims that contribute to the treatment process. These aims, as mentioned before, are subjectivity and participation. The influence of family, caregivers and social circles prominently come to existence as it is reported directly by the hospital services and has been proven by a number of research studies (Pisani & McDaniel, 2005).

There are seven fundamental techniques projected to be implemented step by step by so as to realize those aims and ensure the improvement of the system that consists of the patient and treatment. These techniques involve valuable information for not only the treatment of the patient but also for each and every individual involved in the system, including the caregivers. Addressing the

headings of these techniques, the first one is recognition of biological dimensions. In this phase, the therapist helps with the comprehension of the meaning and function of the illness by approaching relational problems and family system rather than attributing the illness to a biological or psychological pathogenesis with a reductive approach. The second technique is soliciting the story of the illness, during which the therapist keeps on the research on the problems specific to the illness with a historical background of the family. In this phase, the therapist makes sure that family members participate in the process by talking about the same problems during the session as the client does. The third technique is respecting the defense mechanisms, removal blame and admitting the inadmissible feelings. In this phase, the focus is on the feelings of respect, tendency of blame, which are already overthrown. While the therapist tries to accept the feelings of blame and loss of control targeting at deterioration of relationships, he or she pays attention to scaling up these feelings to a more realistic level for the family members and the patient. The fourth technique is maintaining the communication. Through this phase, the therapist aims at making an open communication available for family members so as to let them talk about topics they cannot share normally. The fifth technique taking the progressing issues in hand. That's, the therapist tries to make sense of the emerging problems, the psychological burdens and effects caused by the illness, which are placed above the life cycle of the patient. The sixth technique is giving rise to the sense of agency in patient and family members. The therapist, here, lets the patient and the relatives take active roles in their own health care by expressing themselves, focusing on the sense of agency as Pisani and McDaniel suggested in their study (2005). The final and seventh technique is leaving the door open to possible future contacts. In this last phase, the therapist informs the patient and the family members about the repeatability of chronic illness and their place in the circle of illness, and encourage them to consult to therapy again in such cases, which builds a bridge between the therapist and the future periods.

All these techniques help the patient and caregivers to effectively adapt to the treatment process and makes it possible to handle the illness with a holistic approach rather than identify it only as a medical problem. This holistic does not

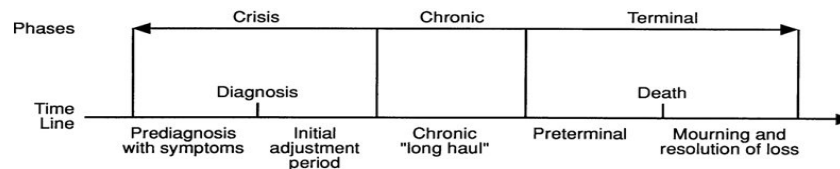
only offer care to the patient, but also perspective provides the caregiver and all the individual involved in the system with a inclusionary space, and thus the process can serve to not only the treatment of the illness but also the period that covers the death, loss and mourning as well. That being the case, the progression of the illness should be discussed together with the family from the very beginning, and the feelings experienced by the caregivers during the treatment process should be accommodated, which, in return, would be of great assistance in dealing with and overcoming the uncertainties. These all brings out changes and adversities for family members in their relation with the patient and in their own life cycles. All the emerging themes supports the arguments that the system gains more endurance while accompanying the patient, and notwithstanding that, family members and caregivers are not only influenced negatively but they could develop their strengths as well. As Walsh (1998), states in his study family resilience is best described with a number of points which can be listed as making meaning out of adversity, keeping a positive outlook, spirituality, flexibility, connectedness with each other and the community, having an adequate economic and social resources, open communication, and problem-solving abilities. Setting off from this definition, it is clear that medical family therapy and family resilience are interrelated. The main reason why medical family therapy is approached with the focus of systems theory and biopsychological model in this study is that that model which serves to the patient and caregivers during the treatment process is, in fact, directly linked to terms such as family resilience, coping, and gain of resources.

The systems theory that generally study families' courses of struggle with the chronic illness actually perceives the family as a system itself and suggests that all the experiences of the individual are in interference with the rest of the family. In that point, Roland's Family Systems Illness Model could help to understand the meaning of the phases of a chronic illness. Before diagnosed with a chronic illness, from the moment when symptoms begin to be visible, all the feelings that could be developed by the individual may lead to unexpected changes on both the relations between the patient and the family members and the inner worlds of the family members as well. These close circle family members are generally the ones who

give care to the patient. According to what has been reported by the healthcare professionals, it is a well-known and proven fact that caregiving duty is naturally accepted by family members due to the fact that Turkey has a culture of collective society. The spouse, parents, children, siblings are all candidates of a secondary trauma both as the caregivers and family members simply because they have to take care of the unexpected trauma while accompanying their beloved one. Furthermore, they have to deal with physical and emotional changes, which ultimately lead to uncertainty and vulnerability (Barnes & Figley, 2005). How the family system would react to the uncertainties, how swiftly the patient would adapt to conditions of illness, how he or she would corroborate the struggle against illness, and how he or she compensate possible loss and mourning cases are all related to not only the siege of the illness that the patient is experiencing but also the way the family system react to problems confronted during the treatment process within the family system variables. With this respect, the story of family in struggling the illness, the type and phase of the illness, the connections among the individual, family and the progression of the illness, the beliefs, ethnics, religion and cultural background of the family, and the dynamics such as perception of normality all have a significant influence on the prognostics course of the illness and on the whole family. In accordance with these connections, as given in the timeline below, the three phases of chronic disease are crisis, chronic and terminal, each including different psychosocial processes (Rolland, 1994).

**Figure 1.** Time Line and Phases of Illness (Adapted from Rolland, 1994)

## TIME LINE AND PHASES OF ILLNESS



Time Line and Phases of Illness

From: Rolland, J.S. *Families, Illness and Disability: An Integrative Treatment Model*. New York: Basic Books, 1994

*Crisis Phase* covers the period from the pre-diagnosis observation of the initial symptoms to initial adaptation to treatment. Due to the fact that *Chronic Phase* comes into focus with stability, progress or intermittent changes, this phase is called “long distance” referring to the daily phases of the disease. The tasks of this phase include preventing exhaustion, decreasing the distortions in relationships, redefining the personal and family goals within the limitations of the disease, loyalty and balancing the goals, considering the possible effects of upcoming phases on the patient and family, and trying to continue to have a normal family life. Through the *Terminal Phase*, the inevitability of death affects all the family life. The priority of the family becomes how to overcome separation, death, mourning, and rearrangement of family beyond the loss.

Taking the level of influence of all these factors on the family, it is obvious that the type and phase of illness, the individual and the family are all interrelated with the progression of the illness. While building up this study, chronic cancer patients are taken as samples. This decision was taken owing to the face-to-face interviews and acquired experiences in hospitals. This was mainly because, according to family systems illness model, the interphase called “chronic phase” is the duration when the caregiver is most densely involved and even integrated in the process. Besides, through this phase, a number of significant issues emerge, such as limitations because of the illness, problems of obedience and separation, and

redefinition of the family and individual goals (Rolland, 1994). Consequently, these all helped to provide a basis for a much more meaningful samples and research on this study that focuses on conservation of resources, and especially gain of resources in the individuals and families involved caregiving.

### **1.3.2. Conservation of Resources Theory**

#### **1.3.2.1. Hobfoll's Conservation of Resources Theory**

Modern daily lifestyles have turned to be negative and stress-filled, which, in return, are causing so many influences on people that there has occurred a wide area of study and research. An individual is likely to benefit from a decent amount of stress as it has a role in putting things in more discipline and advancement to reach their life objectives and personal goals. However, the higher stress one suffers from, the more difficult it is for him or her to cope with. Once the ability to deal with stress is exceeded, there happens to appear significant effects on daily performance, and consequently, result in deterioration of physical and mental health (Kirmayer et al., 2007). Due to the fact that stress influence the whole life to a great extent, the methods to deal with are vital. From this perspective, Conservation of Resources Theory suggests that there is an undeniable and indispensable relationship between stress and the individual's resources.

The COR theory was first initiated by Hobfoll in 1989. It is a broad theory that combines internal and the external processes and evaluates these processes together. According to Hobfoll, resources are described as any materials, objects, individual attributes, qualities, states and energies (Hobfoll, 2001). These resources are valued because they act as conduits to the achievement or protection of the valued resources (Hobfoll, 1989). According to Hobfoll, COR theory is a tool to achieve the resources that are necessary for survival as well as ensuring their presence, and finally conserving them while dealing with stress. It is affirmed by Hobfoll that people who are afraid of losing existing resources are likely to suffer a higher amount of stress. In fact, stress maintains even if resources are lost and even after important resources achievement. These resources could be materials,

things, personal qualities, circumstances and energies (Hobfoll, 1989), all of which are essential to better understanding of stress.

COR Theory emphasizes the influence of losing resources after a trauma. In this respect, Hobfoll proposed three major principles which can be listed as the primacy of loss, the loss and gain spirals, and resource investment (Hobfoll, 1989).

The primary principle can be explained as the fact that losing resources has priority and is actually more significant than gaining resources. Priority of loss of resources means that people prioritize negativity rather than positivity. In other words, what is lost much more important for them in comparison to what they gain. (Hobfoll, 2001).

The other principle is to make investments in resources. This principle suggests that people should make efforts to conserve the current resources and gain new ones. When someone invests in a different and recent resource other than the current ones, his or her capability and competences of defending their resources would be stronger simply because the capacity of their resources would improve as well. In fact, people who already have fewer resources are defenseless in case of a loss in the resources. Moreover, it is even more challenging for them to make investments toward new resources. It is reported that people who invest in resources are likely to decrease the possible negative effects of stress caused by traumas (Freedy & Hobfoll, 1995). The people who suffer from stress due to experiencing difficult situations are to pay attention to using resources effectively and efficiently. If an individual experience stressful event, extensive and drastic losses lead to further stress, which, ultimately, turns to vicious circle of loss for the individual (Freedy & Hobfoll, 1995; Hobfoll, 2001; Dekel & Hobfoll, 2007). The more resources are lost, the more difficult it is for the individual to deal with stress.

The term “Loss and gain spirals” is the third doctrine of COR Theory. People tend to be more defenseless following a loss in their resources. As a result, they become more sensitive to exterior stress factors. Eventually, it turns to be cause for further loss in resources.

COR Theory is distinguished from other theories about stress from a number of respects. Basically, the fundamental of COR is discovering and comprehending

the parts of a person especially in the outer circumstances, and also in the personal psychology (Hobfoll, 1989).

There is one more difference between COR and other theories, which is based on the idea that an individual normally does not have stress factors on his or her own. In contrast, people tend to increase their resources wherever possible. As the COR Theory suggests, people try to counteract possible losses in the future by increasing their current resources. In that matter, people usually make investments on resources in the absence of stress factors. What COR Theory suggests is that individuals have a long-lasting and long-run perception to conserve their resources. In fact, people take the advantage of their current resources in their surroundings to assure and keep the equivalence between the amounts of loss and gain. Hobfoll (1989) exemplifies this with individuals making investments to return to their feelings of love. In other words, the relationships with other individuals are, in fact, investments. Due to the grief of death cases, people generally think of losses in investments (Lindemann, 1944).

A lot of research studies have contributed to the literature about the loss of resources because of various stress factors and most of them have analyzed the influences of such losses on people (O'Neill et al., 1999; Sumer et al., 2005; Hobfoll et al., 2006; Dirik, 2006; Taylor et al., 2006). A great deal of these studies are directly or indirectly related to COR Theory. Some of the topics covered in these studies are victims of natural disasters, people who suffer from terrorist attacks, patients with chronic illnesses, and individuals with physical disorders. Each and every study was carried out with people who undergo various stress factors. Eventually, these studies concluded that losing resources directly are interrelated with stress as a psychological burden.

Individuals experiencing and dealing with natural disasters, wars, migrations and chronic illnesses have significant sources of stress. Health problems like cancer, heart disease and diabetes cause such a high level stress factors that they straightly influence the quality of life. These health problems lead to resource losses. Since the resources of the individual diminish, he or she suffer more

emotionally and psychologically, which eventually falters the possibility of individual's surviving from the disease (Thompson & Kyle, 2000).

In their study, Bisschop, Kriegsman, Beekman and Deeg (2004) reviewed and analyzed psychosocial resources that people have in their life experiences. They focused on seven chronic illnesses. They came up with the conclusion that people who have higher amounts of and more varied resources go through the treatment process much faster and recover the illness more quickly. Another important finding of this study was that people who suffered from none of the seven diseases have much more resources than the ones who has these diseases.

Hobfoll (2011) called some of the resources as "key resources". Some of these key resources are having decent social supports, having an optimistic mindset, having self-confidence, and being self-sufficient. Numerous studies have researched in depth how the key resources such as having decent social supports, having an optimistic mindset, having self-confidence, and being self-sufficient are all interrelated. These research studies have found out that an individual is much more likely to resist to stress provided that he or she has these key resources (Scheier & Carver, 1985; Bandura, 1997).

The theory of conservation of resources lays a bridge between the cognitive and environmental perspectives. According to the theory, resources are the key components of the individual's evaluation of situations and it is defines as individuals' ability to cope with the situations. The resistance is the fact that supports the physiological and mental health of the individuals during this process. Respectively, resistance leads to success by increasing confidence in the competence and the supportive social environment. If the facts do not support perception, they can easily be pushed and turned into unexpected health symptoms (Di Clemente, Crosby & Kegler, 2009).

The theory of conservation of resources can be used in many studies such as business life, natural disasters, and programmes of preventing AIDS as well as it is mentioned in literature before. Especially, it is used in lots of studies which negatively effect the psychological and physiological health such as flood, tornado, earthquake in which the losses of resources are huge. In a study that examines the

psychological impact of resource loss on earthquake victims in Turkey, it is seen that the loss of resources increased psychological stress. (Ironson, Wynings, Schneiderman, Baum, Rodriguez, Greenwood, & Klimas, 1997; Sumer, Karanci, Berument & Gunes, 2005; O'Neill, Evans, Bussman & Strandberg, 1999). The theory of conservation of resources is used in lots of studies which are made with the patients with physiological problem in order to test the relationship between the resources which are owned by individuals and the psychological effects of these resources.

When the researches in literature examined; in his study conducted with hemodialysis patients, Alkar (2006) investigated the psychosocial variables that predict the quality of life and psychological well-being of the patients within the framework of the conservation of resources model. According to the results of the studies, the well-beings of the hemodialysis patients are predicted by the variables such as age, self-respect, the hostile attitude towards expressed emotions, and the ability to cope with the situations. Also, while age, education and having a second chronic illness and ability to cope with situations are the determiner of the health component of the life quality, the variables of having a second chronic illness and coping with it are found as the determiner of mental health component of life quality.

In the study which conducted by Lane and Hobfoll (1992) on chronic respiratory patients, patients' loss of resources and its effects are researched. In conclusion of the research, loss of resources leads patients to get angry and these feelings are also the reason of supporters to get angry by revealing the angry behaviours. These results show that chronic stress is the reason of both personal loss and social loss.

In the study of Dirik (2006) on patients with rheumatoid arthritis in the context of anxiety, depression and post-traumatic development of the protection of resources model, it was found that being a female, tiredness level, loss of resources, helpless coping style and low perceived social support are predicted anxiety. The level of effect of the disease on daily activity, loss of resources, lack of problem-focused coping strategies and low self-efficacy of arthritis have emerged as

determinants of depression. In addition to these, in the development of posttraumatic development; being a female, low severity of illness, high perceived social support and problem focused coping were found meaningful.

To sum up the results of these researches, the COR theory focuses on not only individual psychology but also the environment and relevant system. Individuals are aiming to protect and acquire new resources and not to lose their resources. In this respect, according to the COR theory, people try to create additional resources in the situations where there is no current stress towards resource loss, in order to balance the losses that might take place in the future. The use and existence of these resources is highly important to cope with stress.

### **1.3.2.2. Gain of Resources and Coping Strategies in Family Systems**

Coping can be basically defined as an individual's manners of response to stress. With a more detailed definition, it is the acts of facing and dealing with struggles and accomplishing the problematic experiences with as less harm as possible (Dictionary, 2019). Coping behaviors are generally experienced through three ways: eliminating the potential conditions to cause further problems, controlling the process so as to keep the situation neutral, and managing the problematic effects in a decent level (Pearlin & Schooler, 1978).

In this regard, resources can be defined as what an individual can make use of rather than what they do while coping with the situations (Medical Dictionary, 2019). With a more detailed overview, psychological resources are, in fact, all the personality traits and characteristics that an individual takes advantages of to cope with stress factors and threats. Self-esteem, self-denigration, and mastery are emphasized as the key elements while analyzing life challenges. These psychological resources influence how people respond to possibilities of resource loss, which ultimately aims at gain of resources (Özgün, 2010).

Coping strategies that people draw upon conserving and gaining resources are sparing time for themselves, perceiving the circumstances as they are as if they happen on daily basis, and of course, accepting and having a rationale of negative

situation. Moreover, the nature of the situations experienced are likely to form the coping responses, so the difference between resources as a general term and coping strategies must be the given by defining coping resources as all the personal, group or environmental characteristics that help individuals deal with adapt to stress factors. Investments for and gains of resources are likely to be reported by caregivers who copes with problems productively and with a better focus (Wojcik, McKenzie, Frydenberg & Poole, 2004). Gain of resources are most possible for people has an active, problem-focused perspective in coping with stress factors (Zwiebach, Rhodes & Roemer, 2010).

It is supported by many studies that efforts to deal with stressful situations has a direct relationship with the psychological well-being. The fact that these coping strategies differ from each other is a matter of how the individual assesses his or her power and resources (Özbay, Johnson, Dimoulas, Morgan III, Charney & Southwick, 2007).

Particularly in the case of caregivers, there is more than one variable in the stress process, and people need time for adaptation and adaptation to the new process associated with the entry of the disease into the system. Those who accompany this process have not only a caregiver role, but also many different roles and responsibilities in the family system and in life, such as being a mother or father. All the difficulties this process brings may be stressful for the patient's relative and may cause disappointment. It is clear that challenging processes such as caregiving have negative consequences such as depression, hopelessness, helplessness and uncertainty (Yağmur & Türkmen, 2017).

Lazarus and Folkman (1984) developed and asserted the theory of stress and coping, and then Lazarus (1991) defined coping as a process that evolves from the difference between personal resources and the requirements of the situation. Coping is considered as a cognitive activity consisting of the assessment of the hazard level of the damage and the evaluation of the consequences of a coping action (Özgün, 2010). The stress response phase was described by Lazarus and Folkman (1984) as two main coping strategies. These are a problem-oriented coping and emotion-focused coping strategies. The problem-focused coping strategy briefly addresses

the challenge of focusing on the problem itself, and emotion-focused coping is known as a strategy that focuses on changing emotions without directly addressing the problem. This makes the problem-oriented coping strategies, such as focusing and confrontation on the problem, thinking on other possible factors and outcomes, and actions to reduce the impact of stress, more functional in the chronic disease process (Aslan & Güzel, 2018). Chronic illness affects people, caregivers, large families and the whole system directly and indirectly. Also, the individual and family who have the problem-focused coping ability can interpret the problem from being only a chronic disease and interpret it from a position close to the systemic viewpoint on all affected parts of the disease (Winek, 2009).

Finally, it is worth mentioning the theory of Conservation of Resources that Hobfoll (1989) focuses on the differences of people's reactions to stressful events. According to the Theory of Conservation, stress is defined as a situation where the person loses his or her goals and feels threatened and thus the efforts he makes to achieve these goals are negative (2001). In terms of chronic disease and cancer, it was observed that the caregivers of the family members perceived high levels of stress, and their lives are negatively affected while giving care to patients (Yıldız, Dedeli, & Pakyüz, 2016). When we consider this highly perceived stress factor in terms of Hobfoll's theory, as the first principle of the theory, the explanation that loss of resources are disproportionately more prominent than resource acquisition becomes meaningful (Hobfoll, 1989). Studies on this issue refer to the fact that loss of resources has more effects on psychological health than gain of resources (Benight, Ironson, Klebe, Carver, Wynings, Burnett & Schneiderman, 1999; Ironson et al., 1997). On the other hand, in the third principle of the theory of conservation of resources, it was mentioned that the gain of resources would only gain importance in the context of loss of resources. Increase in losses can also lead to changes in the meaning of gains. In general, it is possible to say that the actions that give rise to positive outcomes such as coping skills are also important in the context of chronic disease, and that the stress factor has a great impact on this process. At this point, it can be thought that the disease and treatment process starting with loss in health can affect the increase of resources by not only staying

at a point focusing on losses (Hobfoll, 1998; Wells, Hobfoll & Lavin, 1999). The individual struggling with the disease and the caregiver is a group who is prone to develop coping skills in order to survive and be functional. Precisely for this reason, in our research, the focus of the study is on the gain of resources, and it has been suggested that coping may have an important place in the context of interpreting the gains that may occur positively after experiencing a loss of resources.

### **1.3.2.3. Resources as Source of Resilience**

Individuals develop various feelings towards daily experiences and situations. Many people become subject to factors that are hard to cope with. Such experiences and situations may vary from loss, illness, physical and mental difficulties of a valuable person to natural disasters, being attacked, and violation of personal physical and psychological limits. Each and every person may react in a different way to such incidents. This is, in fact, due to the nature of humankind as a unique entity, and thus we all have the capacity to approach the circumstances through life with utterly different perspectives and emotions (Masten, 2001).

Herman (1992) hypothesized in his widely accepted trauma model that stressful life experiences can have adverse effects on the individuals in the long term. He also stated that the reaction of an individual towards an incident happening around may turn to a critical and troublesome circumstance in his or her life circle (Herman, 1992). Having a closer look at this statement from the perspective of terminologies such as chronic illness and caregiver burden would help us understand the burdens on the individual and the whole system caused by loss of health. With a sudden diagnosis, or one of your relatives diagnosed as having a chronic disease, the health loss, and the radical changes that develop with them, involve individuals in a stressful life cycle. Chronic illnesses can have a deep impact on many layers of life from family relations and social life to economic life, from daily activities to professional life, or have indirect psychosocial and functional effects on individuals who make up their environment. The intensity of these effects may vary depending on the nature of the situation, the individual's pre-

illness personality, the individual's understanding of the illness, the current living conditions of the individual and the amount of family support or social support he / she receives (Falvo, 2005).

It is a known fact that the health loss processes are experienced mostly traumatic for both the individual who struggle with the disease and their caregivers. According to Jensen (2003), the main feature of traumatic events is the fact that they actually embody a direct threat initially onto victim's life, secondly to his or her body integrity, thirdly to the person he or she loves, and finally to one's belief systems. At this point, chronic diseases with their effect on life, body integrity and one's belief systems can create a traumatic impact area for the person who is struggling with the disease. In addition, a family of systems may experience a similar challenging process as the patient's relatives feel that their loved one's life is under threat. In general, the response to psychological trauma in the literature is divided into two; to feel weak and to be isolated. However, the general acceptance on this subject is that traumatic events do not always traumatize the person (Herman, 1992). Stress factors and protective factors developed by the individual have an important role at this point (Özgün, 2010). As the feelings are mostly negative following the experienced incident, it is necessary to emphasize the stress experienced by the person. However, for psychological well-being, one should be more solution-oriented and close to adaptation with the stress experienced by the person, and he has to reveal the protective resources he has developed. Psychological endurance is a concept that arises precisely at this point. It is defined as "the ability of the person not to lose hope of life and find meaning from life even when faced with any negativity" (Yates, Fanita & Masten, 2014). If the person's variety of response (spiritual, emotional, internal, and external, etc.) is sufficiently advanced and the field of expression is clearly developed, it makes the person adaptable and durable to the current situation. This occurs as a factor that significantly affects the psychological well-being of the person. If the person has the resources to recover himself, the ability to assess the resources of this power and can ensure the continuity of psychological well-being (Özbay et al., 2007).

Psychological resilience can be explained mainly under 3 general categories (Yağmur & Türkmen, 2017); family harmony and support, personal structural features and external support systems (Yates, Fanita & Masten, 2014). First of all, it is useful to look at what the category of family cohesion and support encompasses. Research on this issue states that one's relations with at least one parent or a relative who is a parent is important (Çetin & Basım, 2011). In the personal characteristics' category, concepts such as social, physical strength, intelligence, communication skills, self-efficacy and ability are highlighted (Özbay et al., 2007). Finally, external support systems that increase psychological resilience, friends, neighbors, colleagues, teachers and others who support the difficult time comes from other people with similar features (Bourden, 2013). In addition to all these, according to Cetin and Basin (2011) and Bourden (2013), all social areas that require hobby, activity and all social areas requiring participation and social interaction can be beneficial as they let the people outside of the family systems give external support. Studies in the field of health have significant results in coping with stress and psychological resilience. This indicates that the information activities and activities to be done on the psychological resilience for the relatives of the patients are actually to have a characteristic of protective factor.

In fact, these categories of psychological resilience seem to coincide with the resource diversity mentioned by Hobfoll in the theory of conservation of resources. In Hobfoll's model (1998), he defines four types of sources; the first of these is called object sources, as an example of these resources as home, transportation vehicles and other objective materials needed for life. The second is personal resources, which can be exemplified as skills, self-esteem, optimism, profession, leadership, etc. In the third place, there are health resources, where the health status, work, marriage, and so on. Finally, energy resources are mentioned, which can be called credit, information etc. COR theory is a resource-based theory that includes environmental and internal processes as seen in the examples. Hobfoll (1989), in his theory studying the difference of people's reactions to stressful events, asserts one of its principles as; *“persons should invest resources in order to protect themselves from loss of resources, to recover after loss and ultimately to gain*

*resources*” (p. 73). Based on this principle, when a person has less resources, he or she is vulnerable to stressful situations and has a lower resistance. This means that people who have more resources are more resistant to stress and are able to resist unexpected events. At this point, the concept of psychological endurance comes with complementary and protective properties. As seen in the current literature, it can be said that the increase of people's resources has a relationship with the development of psychological resilience by recognizing the power they have and ensuring their well-being.

Finally, as a result of the research carried out by Yağmur and Türkmen (2017), it was observed that individuals with high psychological resilience had higher levels of well-being, followed by lower stress and depression symptoms. This enables us to predict that the increase of the resources of the person as an aid to the development of resilience against difficult life events.

#### **1.4. Current Study**

##### **1.4.1. Scope of the Current Study**

The first aim of the study is to investigate the relationship between the gain in the conservation of resources of cancer patients' caregivers and the caregiver burden. Since, most of the research findings demonstrated the negative impact of the caregiving experience on one's well-being, there is a gap in the literature as to what are resources needed that may lower the caregiver burden to inform the clinicians in their practice. Thus, this study aims to examine into the effects of resource gain in the conservation of resources on family caregiver burden during the treatment of cancer through one-time, cross-sectional survey study. The data will be collected from Liv Hospital Chemotherapy services from the caregivers of cancer patients who accompany them to the chemotherapy treatment. The participants will complete a demographic form, Conservation of Resources Scale (Hobfoll, 1989) and Caregiver Burden Scale (Zarit, 1980).

In many of the previous studies, the negative effects of caregiving on caregivers have been thoroughly examined. These studies mostly focused on loss

of resources, negative consequences and deterioration of psychology in caregivers. On the other hand, having a look at positive experiences and gain of resources, it is clear that there is a gap in that focus (Hobfoll, Stevens & Zalta, 2012). Despite possible losses, caregiving would have gains as well. These possible findings would open a new path to clinical implications for therapists and health professionals. Recent studies, however, have associated gains of caregiving process with the concept of family resilience and various coping strategies (Ross, Holliman & Dixon, 2003). Consequently, this study would add to literature in that specific point of possible gains through caregiving process.

In addition, another deficiency in the literature is the lack of a large number of studies using the theory of conservation of resources in the focus of cancer. When we look at the different chronic diseases and especially the studies developed in the focus of stress, quite a little new research has been found, while no research has been found in terms of gain of sources in especially the caregivers of cancer patients. Moreover, although there have been many studies on caregiver burden and cancer caregivers, studies on the relationship between caregiver burden and gain of resources have been found to be incomplete in the literature. In the light of all these, this research has been designed with the expectation that caregiving, which is a difficult process, can provide experiences that could improve the individual positively, even if they are caring for the cancer patient. It is aimed to contribute to the processes that are tackled with caregiver burden and to provide this information to the field clinically by trying to reach the information of the person who has an increase in resources, especially by finding out in which sources the increase in the burden of caregiver is observed.

In the research process, the observations made by the researcher, the information obtained from the hospital staff, the interviews with the health management experts and the research studies done, all emphasize that the need for a family therapist in every age group, inpatient and outpatient treatment services in the treatment of chronic disease. The disease is experienced not only by the individual who is fighting the disease, but also by the family members and other caregivers. For this reason, reducing the caregiver burden of the process and seeing

the gains and losses in the caregivers' experiences will shed light on the programs to be developed for the experts to be served in the future. The experience of patients and caregivers are mostly given place in the literature from the perspective of negative impact area and losses experienced. However, in this study, more focus has been given on the gain of resources in caregivers to cancer patients. After finding out in the literature review that the questions of “what kind of positive experiences are observed on the caregiver during the caregiving process” and “gain in which resources would lead to decrease in the caregiver burden”, more attention has been given to the question of whether there is a correlation and prediction between the gain of resources and caregiver burden.

Accordingly, the research question of the study is: “What is the relationship between the gain in the conservation of resources of cancer patients’ caregivers and the caregiver burden?” In consonance with the research question, the hypothesis of this study can be listed as below:

The first main hypothesis is: “There is a correlation between the gain in the conservation of resources of cancer patients’ caregivers and the caregiver burden.” and the sub-hypothesis are listed below.

- a) The gain of resources related to work in the caregivers of the cancer patients is correlated with the caregiver burden.
- b) The gain of self-confidence as one of the personal resources in the caregivers of the cancer patients is correlated with the caregiver burden.
- c) The gain of skills as one of the personal resources in the caregivers of the cancer patients is correlated with the caregiver burden.
- d) The gain of happiness as one of the personal resources in the caregivers of the cancer patients is correlated with the caregiver burden.
- e) The gain of financial resources in the caregivers of the cancer patients is correlated with the caregiver burden.
- f) The gain of energizing / strengthening resources in the caregivers of the cancer patients is correlated with the caregiver burden.
- g) The gain of family as one of the relational resources in the caregivers of the cancer patients is correlated with the caregiver burden.

h) The gain of general resources as relational resources in the caregivers of the cancer patients is correlated with the caregiver burden.

The second main hypothesis is: “The gain of resources predicts caregiver burden of cancer patients’ caregivers”, and the sub-hypothesis are listed below.

- a) The gain of resources related to work predicts caregiver burden of caregivers to the cancer patients.
- b) The gain of self-confidence as one of the personal resources predicts caregiver burden of caregivers to the cancer patients.
- c) The gain of skills as one of the personal resources predicts caregiver burden of caregivers to the cancer patients.
- d) The gain of happiness as one of the personal resources predicts caregiver burden of caregivers to the cancer patients.
- e) The gain of financial resources predicts caregiver burden of caregivers to the cancer patients.
- f) The gain of energizing / strengthening resources predicts caregiver burden of caregivers to the cancer patients.
- g) The gain of family as one of the relational resources predicts caregiver burden of caregivers to the cancer patients.
- h) The gain of general resources as relational resources predicts caregiver burden of caregivers to the cancer patients.

## **CHAPTER II: METHOD**

### **2.1. Participants**

The number of samples was decided after a power analysis by using convenience sampling. Through the power analysis (G power 3.9.1.2), for a low population effect ( $f^2 = .02$  to  $.04$ ) size with  $\alpha = .05$  and the power =  $.80$ , the required sample size was between 84 and 200. The sample of this study is the family caregivers to the cancer patients who were receiving treatment in İstinye University

Liv Hospital Outpatient Chemotherapy Service in İstanbul. Samples were aged above 18, as the caregivers of the outpatients, either male or female.

The inclusion criteria of this study were listed respectively; the first one was family caregivers to the cancer patients who are receiving treatment in İstinye University Liv Hospital Outpatient Chemotherapy Service in Istanbul, the second one was Turkish being their native language, having ability to read and understand Turkish, the third one was being aged above 18, the fourth one was having informed consent obtained. Otherwise, the exclusion criteria of this study were listed as the first one was having inability to read and/or understand Turkish, the second one was having presence of a cognitive or physical disability that would impair their ability to complete questionnaires and interviews, the third one was not being a family member or caregiver of the patient and the last one was being under the age of 18.

The final sample included in the analysis composed of 96 participants. Out of the 120 caregivers who had taken the scales, only 96 caregivers completed the scales exactly. The participants were allowed to choose “other” options for some of the demographic questions to explain themselves clearly.

67 out of 96 participants are female, which makes up 69,8%. The number of male participants is 25, or 26%. On the other hand, 4 participants, or 4,2%, marked the option “I don’t want to answer”. As for the distribution of ages, 33% of the participants are 35 or younger. 30,9% of the participants are between 36 and 45 and 36,2% are above 46.

Having a look at the education background of the participants, one (1%) of the participants is only literate without a formal education. The number of the participants who finished primary school are 10 (10,4%). On the other hand, 30 (31,3%) of the participants have graduated from university, and 10 out 96 (10,4%) have a graduate degree of master’s doctorate or more.

The marital statuses of the participants are as follows: 27 (28,1%) of them are single, 61 (63,5%) are married. The number of divorced participants, however, is 8 (8,3%). The number of children is distributed as 39 participants (67,2%) having 1-2 children, 19 (32,8%) having 3-6.

According to findings, the family income level of participants differs as 3 (3,1%) participants earn less than 2000 TL, 26 (27,1%) earn between 2001-4000 TL, 23 (24%) earn between 5001-6000 TL, 21 (21,9%) earn between 6001-8000 TL, 4 (4,2%) earn between 8001-10000TL, and 19 (19,8%) earn more than 10000TL.

The closeness degree of the caregivers was one of the most significant data about the participants in the scale. The number of participants giving care parents is 44 (45,8%), which is, in fact, the highest rate among all, followed by 18 (18,8%) of participants giving care to a spouse, 13 (13,5%) of participants giving care to a sister or brother, 8 (8,3%) participants giving care to a grandparent, 6 (6,3%) of participants giving care to son or daughter, 4 (4,2%) of participants giving care paid care to a nonfamily patient, and 3 (3,1%) of participants giving care to an aunt or uncle.

The answers given by the participants about the time period of the treatment received by the person they give care are as follows: 30 (31,3%) of the patients have been receiving treatment for a duration between 6 months and 1 year. Twenty-eight (29,2%) of the patients have been receiving treatment for duration of 1 – 2 years. 19 (19,8%) of the patients have been receiving treatment are for more than 3 years while 19 (19,8%) of them have been giving care for less than 6 months.

Participants mostly replied that they live together with the patient. The number of the participants who live with the patient is 70 (72,9%), whereas the ones who do not live with the patient are only 26 (27,1%). When asked how many hours a day they spend giving care, 37 (39,8%) of the participants answered that they give care for a duration of 9 hours daily, 30 (32,3%) of them spare less than 5 hours a day to give care, and 26 (28%) of them give care for a duration between 5 and 9 hours every day.

The other significant question asked to the participants was whether they receive any psychological or psychiatric support during the caregiving process. 72 (75%) of the participants answered that they receive no support; 24 (25%) of the participants admitted that they receive some level of support. There was an additional follow-up question for the ones who answered yes to that question. They

were asked how long has been the duration of the support they have received, and 12 (54,5%) of the them have received a support for a duration of 1 to 2 months while the other 10 (45,5%) have received some level of support for a duration from 3 to 9 months. Another follow-up question was whether they have used any psychiatric drugs during the treatment of the patient they give care to. 78 (81,3%) of the participants answered no, but 18 (18,8%) of them answered yes to that question.

The final question was about the occupation of the participants. 18 (18,8%) are housewives or stay-home-dads, 15 (15,6%) are servants in private sector or experts such as bankers, 14 (14,6%) are retired, 13 (13,5%) are workers, 9 (9,4%) are owners of a business, 8 (8,3%) are self-employed or freelancers, 7 (7,3%) are managers, 6 (6,3%) are students, 4 (4,2%) are civil servant working for the government, whereas 2 of the participants marked the option “other”.

**Table 1. Demographic profile of the respondents**

		n	%
Gender	Female	67	69,8
	Male	25	26,0
	Don't want to explain	4	4,2
Age	35 years and less	31	33,0
	36-45	29	30,9
	46 years and more	34	36,2
Level of Education	Literate	1	1,0
	Primary-Secondary	17	17,7
	High School	28	29,2
	College	10	10,4
	University	30	31,3
	Master – Doctorate or higher	10	10,4
Marital Status	Singe	27	28,1
	Married	61	63,5
	Divorced / Lost Spouse	8	8,3
Do you have children	No	38	40,0
	Yes	57	60,0

Number of Children	1-2	39	67,2
	3-6	19	32,8
Family Income	Under 2000 円	3	3,1
	2001-4000 円	26	27,1
	5001-6000 円	23	24,0
	6001-8000 円	21	21,9
	8001-10000 円	4	4,2
	More than 10000 円	19	19,8
Degree of Relation to the Patient	My child	6	6,3
	My spouse	18	18,8
	Father-Mother	44	45,8
	Sibling	13	13,5
	Grandfather-grandmother	8	8,3
	Aunt-Uncle	3	3,1
	Other	4	4,2
Duration of Treatment	Less than 6 months	19	19,8
	6 months - 1 year	30	31,3
	1-2 years	28	29,2
	3 years or more	19	19,8
Do you Live with the patient to whom you give care	Yes	70	72,9
	No	26	27,1
How many hours do you spare daily to give care?	Less than 5 hours	30	32,3
	5-9 hours	26	28,0
	More than 9 hours	37	39,8
Have you received psychological or psychiatric support during the treatment?	Yes	24	25,0
	No	72	75,0
If yes, how long was the support treatment?	1-2	12	54,5
	3-9	10	45,5
Are you taking any psychiatric medicine currently?	Yes	18	18,8
	No	78	81,3
Employment Status	Housewife / Stay-at-home dad	18	18,8
	Civil servant working for the government	4	4,2
	Servant in private sector / Expert (Banker, etc.)	15	15,6

Worker	13	13,5
Manager	7	7,3
Self-employed / Freelancer	8	8,3
Owner of a business	9	9,4
Retired	14	14,6
Student	6	6,3
Other	2	2,1

## **2.2. Instruments**

Data collection tool for the study is a number of questionnaire forms. The questionnaire forms consist of three sections. The first section of the questionnaire is for the demographic information; the second section is “The Conservation of Resources Evaluation (COR-E) – The Gain of Resources Scale (Hobfoll, Lilly, & Jackson, 1991)”, and the third section is “Caregiver Burden Scale (Zarit, Reever and Bach-Peterson is 1980)”.

### **2.2.1. Demographic Form**

Demographic information section consists of questions to get information about socio-demographic characteristics of the individuals who participate in the research study. The participants will answer questions regarding their gender, age, educational level, marital status, number of children, income, work status, relationship to the patient, duration of treatment, time spent for caregiving and use of psychological and psychiatric care. The demographic form is attached in this application for review.

### **2.2.2. The Conservation of Resources Evaluation (COR-E)**

The Conservation of Resources Evaluation, COR-E in short, is a scale developed by Hobfoll and his colleagues to evaluate a person’s individual resources through 74 items (Hobfoll, Lilly, & Jackson, 1991). COR-E is administered by the

person himself or herself to examine his or her resources that are divided into four basic categories in COR theory:

- object resources (such as home, transportation, and fetish objects)
- conditions (such as being healthy, marriage, and employment)
- personal characteristics (skills such as occupation and leadership; and personal traits such as self-esteem and optimism)
- energies (such as knowledge, money, and credit)

In the COR-E, these resources are given more specifically related to work, material, energy, interpersonal (general and family), and personal (self-esteem, well being, mastery).

COR-E consists of 74 items rated on a 5-point likert scale, and the answer pattern is five-point likert scale. The range of responses are given as 1: not at all, 2: to a small degree, 3: to a moderate degree, 4: to a considerable degree, 5: to a great degree. Originally, COR-E has two separate forms which are categorized as loss and gain. For the loss form in COR-E, participants are requested to rate their loss of resources through the recent year. For gain form in COR-E, participants rate their gain of these items in the same period of time. Cronbach alpha coefficients for the COR-E loss form is assigned in a range from .85 to .91; whereas, it is between .91 to .93 for the COR-E gain form. Test-retest for recent gain and loss is measured between .55 and .64. Also, test-retest for the loss and gain in the recent year is measured between .64 and .67. It has been suggested by a number of authors that COR-E is a reasonable, reliable and valid research instrument in the assessment of loss and gain of resources (e.g. Lilly, & Jackson, 1991; Lane & Hobfoll, 1992; Hobfoll & Lilly, 1993; Freedy & Hobfoll, 1994; Benight et al., 1999). Furthermore, the COR-E has been extensively used in past research studies (e.g. Hobfoll, Freedy, Lane, & Geller, 1990; Freedy, Shaw, Jarrell, & Masters, 1992; Freedy & Hobfoll, 1994; Shteyn, et al., 2003; Dirik, 2006; Walter & Hobfoll, 2009; Banou, Hobfoll, & Tochelman, 2009). Higher score in the test means higher loss or gain regarding the items in the form. However, in this study, only gain form of COR-E was given to the participants. There are two reasons for such and implication. First, it has been observed that there is a gap in the literature about the gain in conservation of

resources. This very study would add to literature in that specific point. Secondly, as it was realized during the pilot study, caregivers in the outpatient chemotherapy service had constraints of time and highly sensitive psychological conditions; thus the loss form was omitted from the questionnaire to make the study more feasible and practicable.

The adaptation of Turkish version of the scale is studied by Özgün and Gençöz (2005), and validity and reliability coefficients are parallel to the original form. COR-E loss and gain form has high internal consistency reliability as Cronbach's alpha coefficient is .96 .98 respectively. Also, the item-total correlations ranges from from .22 to .80 for the gain form, and .17 to .68 for the loss form. Factor analysis of the scale was accounted for 43.45% of the total variance.

Moreover, test-retest reliability coefficients are assigned as and .91 for the gain form .87 for the loss form for a period of 3 weeks. The concurrent validity of the both forms of COR-E are satisfactory as they are supported by a high level of correlation between other related constructs such as depression, anxiety, and self-esteem. Having consistency with the original study, and in accordance with the measures of depression, and state-trait anxiety symptoms, only the loss form scores not ones for the gain form- effectively discriminated individuals with high symptom severity from those with low symptom severity. The results of the study were proven by and supported to the principles of COR theory. Taking all these findings into consideration, Turkish version of COR-E presented good test-retest and internal consistency coefficients. Besides, is has good construct, concurrent, and criterion validity information. Consequently, Turkish version of COR-E is proven to be an instrument which is reliable and valid. (Özgün, 2010.)

### **2.2.3. Caregiver Burden Scale**

This scale was developed by Zarit, Reever and Bach-Peterson is 1980. This scale has been used to evaluate the level of stress in those who give care to an individual or and elderly with nursing necessity. Caregiver Burden Scale, in other

words, a developed version called The Burden Interview (BI) (Zarit, Orr, & Zarit, 1985) can be filled in by the caregiver himself/herself or by the researcher asking the questions, and it consists of 22 statements to determine the effects of caregiving on the individual. The scale is a five-point likert scale with never, rarely, sometimes, often, nearly always options, from 0 to 4. One can get minimum 0, maximum 88 points. Statements in the scale are mostly related to social and emotional fields, and if the point is high, it means the burden level is high (İnci & Erdem, 2008). The internal coefficient of consistency is one of the methods used to determine reliability in the developing scales and cultural adaptation studies.

In general, the internal coefficient of consistency level shows the scale's reliability levels, according to the score between 0.00–0.40 means; the scale is not reliable, the score between 0.40–0.60 means; it is reliable at a considerably low level, the score between 0.60–0.80 means; it is rather highly reliable, the score between 0.80-1.00 means; it is highly reliable (Özdamar, 1997). Reports indicate the reliability coefficients for responses to the full-scale range from  $\alpha = .88$  (Hassinger, 1986) to  $\alpha = .94$  (O'Rourke & Wenaus, 1998). In a different study, the internal coefficient of consistency level was found between 0.87 - 0.94 and the test-retest reliability score was found as 0.71 (Arai et al, 1997; Arai & Washio, 1999; Scazufca, 2002; Taub et al, 2004; Yoon & Robinson, 2005).

The validity and reliability of scale in Turkey is studied by İnci. Cronbach alpha value that shows the reliability coefficient of Caregiver Burden Scale is found 0.95 by İnci & Erdem (2008), which means it is highly reliable.

### **2.3. Procedure**

After receiving the approval from Ethics Committee Board of Istanbul Bilgi University, the data for the research gathered in İstinye University Liv Hospital Outpatient Chemotherapy Service in İstanbul through face-to-face introduction of the questionnaires while the cancer patients are being treated with chemotherapy. The researcher met the caregivers at the waiting room of the chemotherapy services

at times designated by the oncology unit when the patients were receiving chemotherapy.

First, the researcher introduced the study to the participants and review the informed consent forms, and following their approval, the questionnaire package of Demographic Form, Gain Form of Conservation of Resources Evaluation, and Caregiver Burden Scale was given to the participants respectively. The order of the completion of paper-and-pencil scales was important. Before giving the questionnaires, participants were informed about the study and right of leaving the survey. The information and consent form were given on paper and participants read it themselves. After completing the measures, participants were de-briefed and encouraged to ask the researcher their questions regarding the study. If needed, the researcher was provided referrals for psychological support services to the caregivers. Subjects were excluded from the study at any time without prejudice to their care. They were discontinued from the study at the discretion of the Investigator for lack of adherence to study procedures (e.g., failure to complete the questionnaires).

All the data was processed in a password protected computer with access only by the researcher. No third parties could access the information about the research data. Only the researcher and thesis advisor accessed to de-identified data. All the hardcopy data will be disposed with a paper shredder machine in 1 year after the completion of the research study. The hardcopy forms were separated from the consent forms and were de-identified by giving the form an identifying number. Both the consent forms and the survey forms were kept in the researcher's office in a locked cabinet. The de-identified surveys were entered into SPSS by the researcher.

#### **2.4. Data Analysis**

Before conducting any statistics, the data was entered to computer via SPSS program by hand. The analysis of the data carried out through SPSS 24.0, and evaluated on %95 confidence level. The conservation of resources was independent

variable, the burden of family caregivers was the dependent variable. After determining the distribution, correlation test and hierarchical regression model analysis were applied to define the relationship between the gain of resources and caregiver burden. In addition, exploratory analysis was used to determine if the resource valuation and family caregiver burden vary according to socio-demographic factors.

Following the calculation of scale points, the kurtosis and the skewness of the points were evaluated to determine the appropriateness of them for normal distribution. If the value of kurtosis is +3 and -3 and skewness is between +2 and -2, it is evaluated as enough for normal distribution (Groeneveld & Meeden, 1984; Moors, 1986; Hopkins & Weeks, 1990; De Carlo, 1997). After the result of Pearson Correlation analysis to examine the relationship between the gain of resources and caregiver burden, the other specific test was used for calculating the relationship with the foremost points of demographic form. In addition to this, t test, ANOVA tests as comparison tests were used to determine if the resource valuation and family caregiver burden vary according to socio-demographic factors included the demographic form of the research. Also, hierarchical regression model analysis with four steps was conducted to analyze if the sub-dimensions of the gain of resources predict caregiver burden.

At this stage, reliability statistics and Cronbach's alpha values were measured for each of the subscales of the gain of resources scale and the caregiver burden scale (See Appendix G). In this phase, inter-item correlation analyses of all subscales and caregiver burden scale were needed for the reliability of the study. The Cronbach's alphas of this study for the measures of The Gain of Resources range from .69 to .81 and for Zarit's Caregiver Burden Scale .84. In addition, as a result of these inter-item correlation, when the correlated item total correlation scores considered, data cleaning was also done for the items numbered 19, 66 and 74 from the Gain of Resources scale and the items numbered 7, 19, 21 from the Caregiver Burden scale in order to make the internal consistency of the research stronger. Also, considering the limitations of this study as it is cross-sectional, item numbered 20 from the Caregiver Burden scale is reversed (Michalos, 2014). For

this statistical analysis, Pearson Correlation was conducted to see the relationship between the variables in this study. Then, Hierarchical Regression Model were conducted to see whether The Gain of Resources predicts the caregiver burden or not. The reason for the application of a hierarchical regression model analysis with four steps is the fact that, in similar studies, independent variables have generally been entered into the model according to the theory. Therefore, considering the systemic theory, in the hierarchical regression model, the demographic information of the caregivers and then the Interpersonal Resources General and finally material resources were entered into the data. One of the reasons why demographic information was first entered in the model is that systemic theory takes interpersonal characteristics and relationships more important.

## **CHAPTER III: RESULTS**

### **3.1. Descriptive Statistics for the Measures of the Current Study**

#### **3.1.1. Descriptive Statistics for The Gain of Resources (COR-E) and Zarit’s Caregiver Burden Scales**

In order to find descriptive statistics of the research instruments, minimum, maximum score ranges, skewness, kurtosis, Cronbach’s alpha for the internal consistency of the scales were analyzed and presented in Table 2. The total scores of the original COR-E ranged from min. 74 – max. 370 and the total score of Zarit’s Caregiver Burden Scale ranged from between 0 and 88.

**Table 2. Means, Standart Deviations, Score Ranges, Skewness, Kurtosis, Cronbach’s Alpha for the Sub-scales of The Gain of Resources and Caregiver Burden Scale**

	<i>n</i>	<i>Min.</i>	<i>Max.</i>	<i>M</i>	<i>SD</i>	<i>Skewness</i>	<i>Kurtosis</i>	<i>Cronbach's Alpha</i>
Work Resource	96	10,00	34,00	19,84	5,98	,335	-,712	,774

Personal Resources Self-Esteem	96	7,00	27,00	17,85	4,67	-,093	-,309	,774
Personal Resources Mastery	96	7,00	32,00	22,55	5,25	-,705	,838	,751
Energy Resources	96	14,00	46,00	24,88	5,99	1,178	2,029	,734
Personal Resources Well Being	96	6,00	28,00	18,45	4,71	-,570	,077	,815
Material Resources	96	14,00	54,00	23,31	7,78	1,581	2,895	,850
Interpersonal Resources Family	96	9,00	40,00	21,13	6,85	,346	-,424	,786
Interpersonal Resources General	96	8,00	33,00	23,17	6,30	-,313	-,985	,844
Caregiver Burden	96	9,00	54,00	23,63	10,46	1,288	1,432	,847

### 3.2. Differences Among the Levels of Demographic Variables on The Measures of The Study

#### 3.2.1. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Gender

According to t test results there were no statistically significant differences in Zarit's Caregiver Burden total score and sub-scales of The Gain of Resources (COR-E) for gender ( $p>0,05$ ).

**Table 3. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Gender**

Gender	<i>n</i>	<i>Mean</i>	<i>sd</i>	<i>t</i>	<i>p</i>	
Work Resource	Female	67	19,61	6,29	,138	,891
	Male	25	19,44	4,92		
Personal Resources Self Esteem	Female	67	18,27	4,26	1,552	,124
	Male	25	16,56	5,74		

Personal Resources Mastery	Female	67	23,07	4,22	1,446	,159
	Male	25	20,80	7,43		
Personal Resources Well Being	Female	67	18,58	4,24	,440	,663
	Male	25	18,00	6,08		
Material Resources	Female	67	22,70	7,15	-1,247	,216
	Male	25	25,00	9,56		
Energy Resources	Female	67	24,46	6,08	-0,602	0,549
	Male	25	25,32	6,07		
Interpersonal Resources Family	Female	67	21,39	6,35	,391	,697
	Male	25	20,76	8,08		
Interpersonal Resources General	Female	67	23,82	5,93	1,788	0,077
	Male	25	21,20	7,06		
Caregiver Burden	Female	67	19,72	12,56	1,282	0,203
	Male	25	16,20	8,94		

\* $p < 0,05$

### 3.2.2. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Age

There was a statistically significant difference in terms of Energy Resources score among the different age groups ( $p < 0.05$ ). According to this, the mean score of the participants aged 35 years and under ( $M = 26.74$ ,  $SD = 6.81$ ) is the highest, while the mean decreases as the age gets older. There was a statistically significant difference between the age groups in terms of Interpersonal Resources General score ( $p < 0.05$ ). According to this, the mean score of of the participants aged 35 years and under ( $M = 25,32$ ,  $SD= 6,01$ ) was the highest, while the mean of those who were aged from 36 to 45 ( $M = 20,76$ ,  $SD= 6,51$ ) were the lowest.

Finally, there was a statistically significant difference in terms of Work Resources scores between the groups with different ages ( $p < 0.05$ ). Accordingly, the mean of those who are 35 years of age or younger ( $M = 21,16$ ,  $SD= 6,14$ ) is the

highest, while the mean of those who are 46 years and older ( $M = 17,74$ ,  $SD = 4,89$ ) is the lowest.

**Table 4. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Age**

Age		<i>n</i>	<i>Mean</i>	<i>sd</i>	<i>F</i>	<i>p</i>
Work Resource	35 years and less	31	21,16	6,14	3,121	,049*
	36-45	29	20,17	6,10		
	46 years and more	34	17,74	4,89		
Personal Resources Self Esteem	35 years and less	31	17,52	3,43	0,180	,836
	36-45	29	18,21	5,86		
	46 years and more	34	17,65	4,67		
Personal Resources Mastery	35 years and less	31	21,94	4,10	0,979	,379
	36-45	29	23,55	6,28		
	46 years and more	34	21,91	5,11		
Personal Resources Well Being	35 years and less	31	17,94	3,73	0,167	,847
	36-45	29	18,62	5,67		
	46 years and more	34	18,38	4,55		
Material Resources	35 years and less	31	21,94	7,95	0,803	,451
	36-45	29	22,66	6,24		
	46 years and more	34	24,15	7,23		
Energy Resources	35 years and less	31	26,74	6,81	3,637	0,030*
	36-45	29	23,28	4,82		
	46 years and more	34	23,76	4,51		
Interpersonal Resources Family	35 years and less	31	19,45	6,28	2,078	,131
	36-45	29	20,66	6,85		

	46 years and more	34	22,71	6,45		
Interpersonal Resources General	35 years and less	31	25,32	6,01		
	36-45	29	20,76	6,51	4,185	0,018*
	46 years and more	34	23,38	5,88		
Caregiver Burden	35 years and less	31	17,13	12,61		
	36-45	29	20,52	12,02	0,707	0,496
	46 years and more	34	17,82	10,29		

\* $p < 0,05$

### 3.2.3. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Education Level

There was a statistically significant difference in terms of Energy Resources and Work Resources among the groups with different levels of education ( $p < 0.05$ ). For Energy Resources, the mean score of Master - Doctorate or higher group is the highest ( $M = 28,90$ ,  $SD = 6,19$ ), and the Primary-Secondary group has the lowest mean ( $M = 21,06$ ,  $SD = 4,02$ ). Finally, for Work Resources, the mean of Master - Doctorate or higher group is the highest ( $M = 24,90$ ,  $SD = 5,72$ ), and the Primary-Secondary group has the lowest mean ( $M = 16,76$ ,  $SD = 4,63$ ).

**Table 5. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Education Level**

Level of Education		<i>n</i>	<i>Mean</i>	<i>sd</i>	<i>F</i>	<i>p</i>
Work Resource	Primary-Secondary	17	16,76	4,63		
	High School	28	19,18	6,19		
	College	10	18,10	6,01	4,186	,004*
	University	30	21,33	5,35		
	Master – Doctorate or higher	10	24,90	5,72		
Primary-Secondary		17	16,47	5,11	0,856	,493

Personal Resources Self Esteem	High School	28	17,32	5,08		
	College	10	19,00	5,48		
	University	30	18,47	4,04		
	Master – Doctorate or higher	10	18,90	3,81		
Personal Resources Mastery	Primary-Secondary	17	21,41	5,20		
	High School	28	21,93	5,60		
	College	10	24,80	5,53	0,786	,537
	University	30	22,87	5,24		
	Master – Doctorate or higher	10	23,00	4,50		
Personal Resources Well Being	Primary-Secondary	17	17,53	4,40		
	High School	28	18,00	5,30		
	College	10	21,10	4,72	1,753	,145
	University	30	17,73	4,63		
	Master – Doctorate or higher	10	20,60	2,55		
Material Resources	Primary-Secondary	17	22,12	3,85		
	High School	28	23,79	9,50		
	College	10	20,30	4,52	0,696	,596
	University	30	24,57	8,31		
	Master – Doctorate or higher	10	23,90	8,69		
Energy Resources	Primary-Secondary	17	21,06	4,02		
	High School	28	23,86	6,08		
	College	10	22,60	3,98	5,559	0,000*
	University	30	27,37	5,85		
	Master – Doctorate or higher	10	28,90	6,19		
Interpersonal Resources Family	Primary-Secondary	17	21,00	6,62		
	High School	28	22,68	8,30		
	College	10	20,40	5,56	0,619	,650
	University	30	19,93	6,06		
	Master – Doctorate or higher	10	20,60	6,54		

Interpersonal Resources General	Primary-Secondary	17	23,06	5,89	0,048	0,996
	High School	28	23,50	6,43		
	College	10	22,60	6,82		
	University	30	23,07	6,25		
	Master – Doctorate or higher	10	22,80	7,55		
Caregiver Burden	Primary-Secondary	17	17,29	10,07	0,605	0,660
	High School	28	17,39	12,36		
	College	10	16,40	6,17		
	University	30	20,03	13,01		
	Master – Doctorate or higher	10	22,50	12,18		

\* $p < 0,05$

### 3.2.4. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Marital Status

There was a statistically significant difference between the groups with different marital status in terms of Energy Resources ( $p < 0.05$ ). According to this, while the mean score of the Single group was the highest ( $M = 27,48$ ,  $SD = 6,17$ ), the mean of the Divorced / Lost Spouse group was the lowest ( $M = 21,75$ ,  $SD = 4,80$ ). There was a statistically significant difference in Interpersonal Resources Family between marital status groups ( $p < 0.05$ ). According to this, while the mean score of the married ones was the highest ( $M = 23,92$ ,  $SD = 6,16$ ), the mean of those who were separated from their spouses / lost their spouses was the lowest ( $M = 13,75$ ,  $SD = 3,88$ ).

**Table 6. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Marital Status**

Marital Status		<i>n</i>	<i>Mean</i>	<i>sd</i>	<i>F</i>	<i>p</i>
Work Resource	Singe	27	22,07	5,01	2,853	,063
	Married	61	18,84	6,18		

	Divorced / Lost Spouse	8	20,00	6,05		
Personal Resources Self Esteem	Singe	27	18,33	3,88		
	Married	61	17,64	4,93	0,203	,816
	Divorced / Lost Spouse	8	17,88	5,49		
Personal Resources Mastery	Singe	27	23,41	4,18		
	Married	61	22,16	5,70	0,520	,596
	Divorced / Lost Spouse	8	22,63	5,15		
Personal Resources Well Being	Singe	27	18,81	3,86		
	Married	61	18,38	4,91	0,174	,841
	Divorced / Lost Spouse	8	17,75	6,14		
Material Resources	Singe	27	22,04	7,10		
	Married	61	24,18	8,39	1,098	,338
	Divorced / Lost Spouse	8	21,00	3,51		
Energy Resources	Singe	27	27,48	6,17		
	Married	61	24,15	5,74	4,371	0,015*
	Divorced / Lost Spouse	8	21,75	4,80		
Interpersonal Resources Family	Singe	27	17,00	5,20		
	Married	61	23,92	6,16	20,662	,000*
	Divorced / Lost Spouse	8	13,75	3,88		
Interpersonal Resources General	Singe	27	23,44	6,77		
	Married	61	23,59	6,12	1,955	0,147
	Divorced / Lost Spouse	8	19,00	4,99		
Caregiver Burden	Singe	27	19,04	12,17		
	Married	61	17,30	10,76	2,199	0,117
	Divorced / Lost Spouse	8	26,25	14,16		

\*p<0,05

### 3.2.5. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Number of Children

There was a statistically significant difference in terms of Work Resource between the participants with children and the ones without a child ( $p < 0.05$ ). Accordingly, the mean score of the participants have no children is greater ( $M = 21,66$ ,  $SD = 5,20$ ). There was a statistically significant difference in energy resources between children and non-children ( $p < 0.05$ ). Accordingly, the mean score of the participants who have no children is greater ( $M = 26,29$ ,  $SD = 5,93$ ). There was a statistically significant difference in terms of Interpersonal Resources Family and between participants with and without children ( $p < 0.05$ ). According to this, the mean score of the participants who have children is greater ( $M = 23,53$ ,  $SD = 6,26$ ).

**Table 7. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Number of Children**

Do you have children		<i>n</i>	<i>Mean</i>	<i>sd</i>	<i>t</i>	<i>p</i>
Work Resource	No	38	21,66	5,20	2,690	,008*
	Yes	57	18,44	6,03		
Personal Resources Self Esteem	No	38	18,05	3,76	0,418	,677
	Yes	57	17,67	5,23		
Personal Resources Mastery	No	38	23,21	4,20	1,164	,247
	Yes	57	21,95	5,74		
Personal Resources Well Being	No	38	18,74	4,21	0,647	,519
	Yes	57	18,11	4,94		
Material Resources	No	38	22,29	7,24	-0,778	,439
	Yes	57	23,46	7,11		
Energy Resources	No	38	26,29	5,93	2,358	0,020*
	Yes	57	23,58	5,18		
Interpersonal Resources Family	No	38	17,03	5,03	-5,349	,000*
	Yes	57	23,53	6,26		

Interpersonal Resources General	No	38	23,18	6,65	0,046	0,963
	Yes	57	23,12	6,16		
Caregiver Burden	No	38	19,89	12,94	1,053	0,295
	Yes	57	17,35	10,51		

\* $p < 0,05$

### 3.2.6. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Family Income

There was a statistically significant difference in energy resources between the groups with different family income ( $p < 0.05$ ). According to this, the mean of those with an income of more than 8000 TL ( $M = 27,22$ ,  $SD = 5,74$ ), while the mean of those with less than 4000 TL is the lowest ( $M = 22,17$ ,  $SD = 5,86$ ).

**Table 8. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Family Income**

Family Income		<i>n</i>	<i>Mean</i>	<i>sd</i>	<i>F</i>	<i>p</i>
Work Resource	Under 4000 ₺	29	18,52	5,97	,702	,553
	5001-6000 ₺	23	20,35	6,75		
	6001-8000 ₺	21	20,19	5,78		
	More than 8000 ₺	23	20,70	5,45		
Personal Resources Self Esteem	Under 4000 ₺	29	18,14	4,92	,348	,791
	5001-6000 ₺	23	18,39	5,52		
	6001-8000 ₺	21	17,05	4,74		
	More than 8000 ₺	23	17,70	3,38		
Personal Resources Mastery	Under 4000 ₺	29	23,03	5,05	,172	,915
	5001-6000 ₺	23	22,70	6,57		
	6001-8000 ₺	21	22,29	5,83		
	Morethan 8000 ₺	23	22,04	3,44		
	Under 4000 ₺	29	18,48	5,34	,376	,770

Personal Resources Well Being	5001-6000 ₺	23	19,22	5,04		
	6001-8000 ₺	21	18,33	4,76		
	Morethan 8000 ₺	23	17,74	3,49		
Material Resources	Under 4000 ₺	29	21,83	6,52		
	5001-6000 ₺	23	23,83	9,73		
	6001-8000 ₺	21	24,67	6,14	,592	,622
	Morethan 8000 ₺	23	23,43	8,57		
Energy Resources	Under 4000 ₺	29	22,17	5,86		
	5001-6000 ₺	23	26,17	7,02		
	6001-8000 ₺	21	24,67	3,69	3,808	0,013*
	Morethan 8000 ₺	23	27,22	5,74		
Interpersonal Resources Family	Under 4000 ₺	29	20,21	6,93		
	5001-6000 ₺	23	21,91	8,60		
	6001-8000 ₺	21	21,29	5,41	,281	,839
	Morethan 8000 ₺	23	21,35	6,26		
Interpersonal Resources General	Under 4000 TL	29	20,97	5,65		
	5001-6000 TL	23	23,17	7,40		
	6001-8000 TL	21	24,10	6,23	2,120	0,103
	Morethan 8000 ₺	23	25,09	5,42		
Caregiver Burden	Under 4000 TL	29	20,31	12,38		
	5001-6000 TL	23	16,57	9,11		
	6001-8000 TL	21	18,52	12,80	0,444	0,722
	Morethan 8000 ₺	23	18,26	12,05		

\*p<0,05

### 3.2.7. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Degree of Relation to the Patient

There was a statistically significant difference in terms of Personal Resources Mastery between the groups with different levels of affinity with the patient ( $p < 0.05$ ). According to this, the mean score of the participants whose sibling is the patient was the lowest ( $M = 25,00$ ,  $SD = 4,28$ ), while the mean of the participants whose father or mother is the patient was the lowest ( $M = 20,80$ ,  $SD = 5,83$ ).

There was a statistically significant difference in terms of Personal Resources Well Being among the groups with different levels of affinity with the patient ( $p < 0.05$ ). According to this, the mean score of the participants whose sibling is the patient was the highest ( $M = 21,54$ ,  $SD = 2,96$ ), while the mean of the participants whose father or mother is the patient was the lowest ( $M = 17,05$ ,  $SD = 2,96$ ).

**Table 9. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Degree of Relation to the Patient**

Degree of Relation to the Patient		<i>n</i>	<i>Mean</i>	<i>sd</i>	<i>F</i>	<i>p</i>
Work Resource	My spouse	18	19,78	5,59	,050	,995
	Father-Mother	44	19,61	6,75		
	Sibling	13	20,38	5,09		
	Grandfather-grandmother	8	19,88	4,29		
	Other	13	20,15	6,19		
Personal Resources Self Esteem	My spouse	18	19,11	4,69	1,303	,275
	Father-Mother	44	16,82	5,05		
	Sibling	13	19,46	3,80		
	Grandfather-grandmother	8	17,50	1,77		
	Other	13	18,23	4,94		
	My spouse	18	24,56	4,84	3,211	,016*
	Father-Mother	44	20,80	5,83		

Personal Resources Mastery	Sibling	13	25,00	4,28		
	Grandfather-grandmother	8	21,38	2,97		
	Other	13	24,00	3,61		
	My spouse	18	18,83	5,25		
Personal Resources Well Being	Father-Mother	44	17,05	4,86		
	Sibling	13	21,54	2,96	2,777	,032*
	Grandfather-grandmother	8	18,50	3,78		
	Other	13	19,54	3,93		
	My spouse	18	25,89	9,94		
Material Resources	Father-Mother	44	23,64	8,32		
	Sibling	13	21,46	5,36	1,007	,408
	Grandfather-grandmother	8	20,63	4,90		
	Other	13	22,15	5,34		
	My spouse	18	25,94	6,58		
Energy Resources	Father-Mother	44	24,89	7,00		
	Sibling	13	24,54	3,53	0,365	0,833
	Grandfather-grandmother	8	25,50	4,31		
	Other	13	23,38	4,50		
	My spouse	18	24,22	6,81		
Interpersonal Resources Family	Father-Mother	44	20,80	7,18		
	Sibling	13	21,00	6,31	1,372	,250
	Grandfather-grandmother	8	19,50	4,63		
	Other	13	19,08	6,87		
	My spouse	18	23,89	4,68		
Interpersonal Resources General	Father-Mother	44	22,36	6,77		
	Sibling	13	23,46	6,64	0,481	0,750
	Grandfather-grandmother	8	25,38	6,52		
	Other	13	23,23	6,56		
Caregiver Burden	My spouse	18	22,22	14,19		
	Father-Mother	44	19,55	10,65	2,099	0,087
	Sibling	13	15,31	7,10		

Grandfather-grandmother	8	9,50	6,68
Other	13	18,77	14,37

\*p<0,05

### 3.2.8. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Duration of Treatment

There was no statistically significant difference between the groups with different durations of treatment ( $p > 0.05$ ).

**Table 10. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Duration of Treatment**

Duration of Treatment	<i>n</i>	<i>Mean</i>	<i>sd</i>	<i>F</i>	<i>p</i>	
Work Resource	Less than 6 months	19	20,79	5,20	,228	,876
	6 months - 1 year	30	19,83	6,36		
	1-2 years	28	19,32	6,25		
	3 years or more	19	19,68	6,05		
Personal Resources Self Esteem	Less than 6 months	19	18,16	4,34	,432	,730
	6 months - 1 year	30	18,03	4,48		
	1-2 years	28	17,04	5,67		
	3 years or more	19	18,47	3,76		
Personal Resources Mastery	Less than 6 months	19	23,11	4,38	,235	,872
	6 months - 1 year	30	22,83	5,22		
	1-2 years	28	22,39	6,49		
	3 years or more	19	21,79	4,26		
Personal Resources Well Being	Less than 6 months	19	19,05	3,55	,234	,873
	6 months - 1 year	30	18,00	4,61		
	1-2 years	28	18,29	5,74		
	3 years or more	19	18,79	4,44		
Material Resources	Less than 6 months	19	22,05	5,06	1,441	,236
	6 months - 1 year	30	22,60	7,81		

	1-2 years	28	22,71	7,42		
	3 years or more	19	26,58	9,94		
Energy Resources	Less than 6 months	19	25,00	4,48	0,286	0,835
	6 months - 1 year	30	24,87	6,11		
	1-2 years	28	24,18	6,13		
	3 years or more	19	25,84	7,18		
Interpersonal Resources Family	Less than 6 months	19	21,16	6,69	,483	,695
	6 months - 1 year	30	22,30	7,23		
	1-2 years	28	20,43	6,74		
	3 years or more	19	20,26	6,82		
Interpersonal Resources General	Less than 6 months	19	22,32	6,51	0,829	0,481
	6 months - 1 year	30	24,67	5,78		
	1-2 years	28	22,61	6,97		
	3 years or more	19	22,47	5,88		
Caregiver Burden	Less than 6 months	19	15,37	9,24	2,089	0,107
	6 months - 1 year	30	20,27	13,94		
	1-2 years	28	15,93	9,77		
	3 years or more	19	22,79	11,06		

\*p<0,05

### 3.2.9. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Whether Living with the Patient

There was no statistically significant difference in scores between the caregivers living with the patient and the ones who are not living the patient. ( $p > 0.05$ ).

**Table 11. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Whether Living with the Patient**

Do you Live with the patient to whom you give care	n	Mean	sd	t	p
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Work Resource	Yes	70	19,73	6,00	-,308	,759
	No	26	20,15	6,04		
Personal Resources Self Esteem	Yes	70	17,76	4,59	-,333	,740
	No	26	18,12	4,96		
Personal Resources Mastery	Yes	70	22,76	5,04	,626	,533
	No	26	22,00	5,87		
Personal Resources Well Being	Yes	70	18,26	4,70	-,650	,517
	No	26	18,96	4,76		
Material Resources	Yes	70	23,44	8,22	,268	,789
	No	26	22,96	6,59		
Energy Resources	Yes	70	25,06	6,32	0,458	0,648
	No	26	24,42	5,11		
Interpersonal Resources Family	Yes	70	20,79	7,05	-,795	,429
	No	26	22,04	6,30		
Interpersonal Resources General	Yes	70	23,77	6,07	1,556	0,123
	No	26	21,54	6,73		
Caregiver Burden	Yes	70	19,51	12,10	1,369	0,174
	No	26	15,88	9,83		

\* $p < 0,05$

### 3.2.10. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Number of Hours Spared Daily to Give Care

There was a statistically significant difference in terms of Work Resource between the groups who have different amounts of average time allocated for care support ( $p < 0.05$ ). According to this, while the mean score of those who spares less than 5 hours is the highest ( $M = 22,57$ ,  $SD = 6,24$ ), the mean decreases as the time increases.

**Table 12. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Number of Hours Spared Daily to Give Care**

How many hours do you spare daily to give care?		n	Mean	sd	F	p
Work Resource	Less than 5 hours	30	22,57	6,24	5,531	,005*
	5-9 hours	26	19,65	4,37		
	More than 9 hours	37	17,92	6,06		
Personal Resources Self Esteem	Less than 5 hours	30	18,63	4,25	2,126	,125
	5-9 hours	26	18,85	4,20		
	More than 9 hours	37	16,76	4,97		
Personal Resources Mastery	Less than 5 hours	30	23,03	5,40	1,070	,347
	5-9 hours	26	23,77	4,68		
	More than 9 hours	37	21,92	5,02		
Personal Resources Well Being	Less than 5 hours	30	19,33	4,01	1,774	,175
	5-9 hours	26	19,35	4,17		
	More than 9 hours	37	17,49	5,37		
Material Resources	Less than 5 hours	30	24,40	8,23	0,429	,653
	5-9 hours	26	22,50	6,71		
	More than 9 hours	37	23,16	8,30		
Energy Resources	Less than 5 hours	30	26,80	6,47	2,530	0,085
	5-9 hours	26	24,62	4,73		
	More than 9 hours	37	23,54	6,25		
Interpersonal Resources Family	Less than 5 hours	30	22,17	7,13	0,438	,647
	5-9 hours	26	20,46	6,08		
	More than 9 hours	37	21,14	7,25		
Interpersonal Resources General	Less than 5 hours	30	21,57	5,74	2,052	0,134
	5-9 hours	26	24,15	6,45		
	More than 9 hours	37	24,38	6,04		

	Less than 5 hours	30	18,50	11,15		
Caregiver Burden	5-9 hours	26	16,31	10,03	0,880	0,418
	More than 9 hours	37	20,30	13,26		

\*p<0,05

### 3.2.11. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Whether the Caregiver Has Received Psychological or Psychiatric Support During the Treatment

In terms of Interpersonal Resources General, there was a statistically significant difference ( $p < 0.05$ ) between the caregivers who received psychological or psychiatric support and the ones who did not get any support. Accordingly, the mean score of the ones who has received support is greater ( $M = 25,88$ ,  $SD = 5,54$ ).

**Table 13. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Whether Caregiver Has Received Psychological or Psychiatric Support during the Treatment**

Have you received psychological or psychiatric support during the treatment?		n	Mean	sd	t	p
Work Resource	Yes	24	19,17	5,55	-,638	,525
	No	72	20,07	6,14		
Personal Resources Self Esteem	Yes	24	18,08	4,26	,276	,783
	No	72	17,78	4,82		
Personal Resources Mastery	Yes	24	24,08	4,84	1,664	,099
	No	72	22,04	5,32		
Personal Resources Well Being	Yes	24	18,83	4,43	,461	,646
	No	72	18,32	4,82		
Material Resources	Yes	24	22,08	6,35	-,893	,374
	No	72	23,72	8,20		
Energy Resources	Yes	24	25,08	4,16	0,186	0,853
	No	72	24,82	6,52		

Interpersonal Resources Family	Yes	24	20,50	4,77	-,514	,608
	No	72	21,33	7,43		
Interpersonal Resources General	Yes	24	25,88	5,54	2,500	0,014*
	No	72	22,26	6,31		
Caregiver Burden	Yes	24	17,88	12,64	-0,319	0,751
	No	72	18,75	11,31		

\*p<0,05

### 3.2.12. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Whether Caregiver Is Taking Psychiatric Medicine Currently

There was no statistically significant difference in points in terms of caregiver's taking psychiatric medicine ( $p > 0.05$ ).

**Table 14. Comparison of Sub-Scales of The Gain of Resources and Zarit's Caregiver Burden Scale According to Whether Caregiver Is Taking Psychiatric Medicine Currently**

Are you taking any psychiatric medicine currently?		n	Mean	sd	t	p
Work Resource	Yes	18	18,06	5,60	-1,415	,160
	No	78	20,26	6,02		
Personal Resources Self Esteem	Yes	18	18,28	4,97	0,425	,672
	No	78	17,76	4,62		
Personal Resources Mastery	Yes	18	23,17	5,26	0,549	,585
	No	78	22,41	5,28		
Personal Resources Well Being	Yes	18	18,78	4,94	0,328	,743
	No	78	18,37	4,68		
Material Resources	Yes	18	24,61	7,70	0,784	,435
	No	78	23,01	7,82		
Energy Resources	Yes	18	24,33	4,30	-0,431	0,667
	No	78	25,01	6,34		

Interpersonal Resources Family	Yes	18	21,61	5,18	0,333	,740
	No	78	21,01	7,20		
Interpersonal Resources General	Yes	18	24,78	5,45	1,207	0,230
	No	78	22,79	6,45		
Caregiver Burden	Yes	18	21,61	13,18	1,254	,213
	No	78	17,82	11,17		

\*p<0,05

### 3.3. Analyses for Testing the Hypotheses

#### 3.3.1. Correlation between The Gain of Resources (COR-E) and Zarit's Caregiver Burden Scale

According to the results of the analysis, there is a negative relationship between caregiver burden and Interpersonal General Resources. This means that when the general relational resources of the caregivers participating in the study increase, the caregiver burden decreases. However, there is a positive relationship between caregiver burden and Material Resources. This relationship means that caregivers who have participated in the research have increased their caregiver burden when their financial resources increase. The increase in material resources is a variable that negatively affects the caregiver burden.

**Table 15. Correlation between Sub-Scales of The Gain of Resources (COR-E) and Zarit's Caregiver Burden Scale**

	1	2	3	4	5	6	7	8	9
1. Work Resource	1								
2. Personal Resources Self Esteem	,465**	1							

<b>3. Personal Resources Mastery</b>	,345**	,750**	1						
<b>4. Personal Resources Well Being</b>	,273**	,725**	,709**	1					
<b>5. Material Resources</b>	,521**	,220*	,230*	0,151	1				
<b>6. Interpersonal Resources Family</b>	0,115	0,100	0,131	0,155	,422**	1			
<b>7. Energy Resources</b>	,644**	,237*	,299**	,227*	,716**	,413**	1		
<b>8. Interpersonal Resources General</b>	-0,154	-0,171	0,064	-0,005	-0,054	,461**	0,197	1	
<b>9. Caregiver Burden</b>	0,128	0,047	0,031	-0,163	,293**	-0,177	0,059	-,313**	1

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\*p<0,05 \*\*p<0,01

### 3.3.2. Regression Analyses for Sub-Scales of The Gain of Resources (COR-E) and Zarit's Caregiver Burden Scale

As a result of the hierarchical regression analysis, 4 models were formed. In model 1, only one of the independent variables, gender, has a statistically significant effect on the caregiver burden variable. The percentage of the model was calculated as 8.7%. According to this result, in terms of regression values, only gender is a variable that affects the caregiver burden.

In model 2, gender and Interpersonal Resources General as independent variables have a statistically significant effect on the caregiver burden variable. The percentage of explanation of the model increased by 14.7%, and it was calculated as 23.4%. According to this result, in terms of regression values, the Interpersonal Resources General subscale is a variable affecting the caregiver burden.

In Model 3, the of independent variables of gender and Interpersonal Resources General continue to have a statistically significant effect on the caregiver burden variable. The percentage of the model was calculated as 23.7% with an increase of 0.3%.

In model 4, independent variables of gender, Interpersonal Resources General and Material Resources have a statistically significant effect on the caregiver burden variable. The percentage of the model was calculated as 32,6% with an increase of 8,9% when the Material Resources variable was added.

As a result of regression analysis, it was concluded that gender, Interpersonal Resources General and Material Resources variables have an effect on the caregiver burden variable.

**Table 16. Regression Analyses for Sub-Scales of The Gain of Resources (COR-E) and Zarit's Caregiver Burden Scale**

Step	Variable	<i>b</i>	SE	$\beta$	<i>p</i>
<b>1</b>	Gender	-6,410	3,037	-0,243	0,038*
	Age	0,521	1,617	0,037	0,748
	Employment Status	0,397	0,459	0,095	0,389
	Degree of Relation to the Patient	-0,663	0,852	-0,083	0,439
	Duration of Treatment	1,573	1,243	0,138	0,209
	Do you Live with the patient to whom you give care	-3,148	2,879	-0,119	0,277
<b>R</b>	0,295				
<b>R<sup>2</sup></b>	0,087				
<b><math>\Delta R^2</math></b>	0,087				
<b>2</b>	Gender	-8,430	2,864	-0,319	0,004*
	Age	0,778	1,566	0,055	0,621
	Employment Status	0,349	0,449	0,084	0,439
	Degree of Relation to the Patient	-0,719	0,796	-0,090	0,369
	Duration of Treatment	1,284	1,158	0,113	0,271

	Do you Live with the patient to whom you give care	-4,442	2,714	-0,168	0,105
	Interpersonal Resources Family	-0,166	0,224	-0,093	0,459
	Interpersonal Resources General	-0,623	0,222	-0,339	0,006*
<b>R</b>	0,484				
<b>R<sup>2</sup></b>	0,234				
<b>ΔR<sup>2</sup></b>	0,147				
	Gender	-8,852	2,972	-0,335	0,004*
	Age	0,773	1,573	0,055	0,624
	Employment Status	0,387	0,456	0,093	0,399
	Degree of Relation to the Patient	-0,710	0,799	-0,089	0,377
<b>3</b>	Duration of Treatment	1,310	1,164	0,115	0,264
	Do you Live with the patient to whom you give care	-4,495	2,727	-0,170	0,103
	Interpersonal Resources Family	-0,131	0,233	-0,073	0,577
	Interpersonal Resources General	-0,667	0,236	-0,363	0,006*
	Personal Resources Self Esteem	-0,146	0,260	-0,059	0,576
<b>R</b>	0,487				
<b>R<sup>2</sup></b>	0,237				
<b>ΔR<sup>2</sup></b>	0,003				
	Gender	-9,173	2,812	-0,347	0,002*
	Age	1,155	1,492	0,082	0,441
	Employment Status	0,273	0,432	0,065	0,530
	Degree of Relation to the Patient	-0,611	0,756	-0,076	0,421
	Duration of Treatment	0,467	1,131	0,041	0,681
<b>4</b>	Do you Live with the patient to whom you give care	-3,917	2,584	-0,148	0,134
	Interpersonal Resources Family	-0,463	0,243	-0,260	0,060
	Interpersonal Resources General	-0,476	0,231	-0,259	0,042*
	Personal Resources Self Esteem	-0,248	0,248	-0,101	0,320
	Material Resources	0,563	0,173	0,348	0,002*
<b>R</b>	0,571				

R<sup>2</sup> 0,326

$\Delta R^2$  0,089

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\*p<0,05

### 3.3.3. Summary of Hypothesis Testing

**The first main hypothesis is:** “There is a correlation between the gain in the conservation of resources of cancer patients’ caregivers and the caregiver burden.” and the sub-hypothesis are listed below:

- The gain of resources related to **work** in the caregivers of the cancer patients is correlated with the caregiver burden (Rejected).

**p> 0.05**

- The gain of **self-confidence as one of the personal resources** in the caregivers of the cancer patients is correlated with the caregiver burden (Rejected).

**p> 0.05**

- The gain of **skills as one of the personal resources** in the caregivers of the cancer patients is correlated with the caregiver burden (Rejected).

**p> 0.05**

- The gain of **happiness as one of the personal resources** in the caregivers of the cancer patients is correlated with the caregiver burden (Rejected).

**p> 0.05**

- The gain of **material resources** in the caregivers of the cancer patients is correlated with the caregiver burden (Confirmed).

**p<0,05**

- The gain of **energizing / strengthening resources** in the caregivers of the cancer patients is correlated with the caregiver burden (Rejected).

**p> 0.05**

- The gain of **family resources as one of the relational resources** in the caregivers of the cancer patients is correlated with the caregiver burden (Rejected).

**p> 0.05**

- The gain of **general resources as relational resources** in the caregivers of the cancer patients is correlated with the caregiver burden (Confirmed).  
**p<0,05**

**The second main hypothesis is:** “The gain of resources predicts caregiver burden of cancer patients’ caregivers”, and the sub-hypothesis are listed below:

- The gain of resources related to **work** predicts caregiver burden of caregivers to the cancer patients (Rejected).  
**p> 0.05**
- The gain of **self-confidence as one of the personal resources** predicts caregiver burden of caregivers to the cancer patients (Rejected).  
**p> 0.05**
- The gain of **skills as one of the personal resources** predicts caregiver burden of caregivers to the cancer patients (Rejected).  
**p> 0.05**
- The gain of **happiness as one of the personal resources** predicts caregiver burden of caregivers to the cancer patients (Rejected).  
**p> 0.05**
- The gain of **material resources** predicts caregiver burden of caregivers to the cancer patients (Confirmed).  
**p<0,05**
- The gain of **energizing / strengthening resources** predicts caregiver burden of caregivers to the cancer patients (Rejected).  
**p> 0.05**
- The gain of **family as one of the relational resources** predicts caregiver burden of caregivers to the cancer patients (Rejected).  
**p> 0.05**
- The gain of **general resources as relational resources** predicts caregiver burden of caregivers to the cancer patients (Confirmed).  
**p<0,05**

## CHAPTER IV: DISCUSSION

### 4.1 Overview of the Study

This study was conducted on caregivers of cancer patients receiving treatment in outpatient clinic and receiving chemotherapy services. Many studies in the literature on the burden of caregiver have focused on the difficulties experienced by the caregiver in the treatment process and the increasing stress level with these difficulties, burnout, experiential and relational loss of resources. The main purpose of this study is to look at whether there is an increase the resources of the relatives who accompany the treatment in this meaningful journey, and what could be the resources that can strengthen the person while decreasing the resources. In this study conducted within that context, Hobfoll's conservation or resources theory (1989) has been utilized, and it has been investigated to what level and what areas the resources in the individual's life increase, with an eye considering the relation between these and the caregiver burden. In this study, while some demographic characteristics were highlighted in the context of resource gain of participants, no significant difference was observed in some of the characteristics. In general, although there was not a significant correlation between resource gain and caregiver burden, there was a significant predictive relationship between caregiver burden and the variables of interpersonal general resources and material resources, which are sub-scales of resource gain (See Table 17). Before discussing these significant assumptive relationships and demographic variables, it is useful to review the sample of 96 participants in the study and interpret this cross-sectional study through the participatory characteristics.

According to the demographic findings of the study, there are a total of 96 caregiver participants, 67 of whom are women, 25 of them are men, and 4 of them do not want to specify their gender. The fact that 69.8% of the participants are female was an expected result as seen in previous studies. It is noteworthy that there were similar ratios of female participants in studies conducted on individuals who are caregivers to chronically ill patients in Turkey in 2016, which measures the caregiver burden and life quality of the caregivers to chronic patients in primary as

caregiver (Yeşil, Ulusoy & Korkmaz, 2016). According to the findings of the study, 68,50% of the participants were female and 31,50% were male. The roles we have in relationships and family are important factors affecting human life and participation in life. In defining individual identity, it can be claimed that a complex mixture of many various social roles and some of these roles have a greater meaning and importance for the individual (Abrar and Ghouri, 2000).

When caregiver burden is mentioned as a result of social roles, the socio-cultural characteristics, the identity of the caregivers as a result of gender roles defined for men and women, what comes to mind is women, and this is highly meaningful for this specific study done in Turkey. According to another study on the roles of men and women, the educational level and the social environment in which the family enters, the style of upbringing of children, all develop the gender identity that children gain when they grow up. Thus, for men, work roles are taken more significantly than family roles; however, for women, roles such as housework, caring, and raising children stand out (Powell and Greenhouse, 2010).

Therefore, the high rate of women in the demographic ratio of caregivers in this study reveals that women are more common in our country in the caregiver role. On the other hand, when we look at the results of the male participants who participated in the study, especially the reference and integration of the role of women and caregiving in most of the literature unfortunately limits the interpretations that can be said about men. However, besides the patriarchal system emphasizing male sovereignty, it can be suggested that some of the prohibited and impossible qualities it imposes on men create problems both in men in their own life and in the process in terms of creating expressions in emotional processes such as caregiving (Çelik, 2016). In fact, it is perceived by the society that men are strong, and they are obliged not to show their feelings or cry. However, the perceptions of masculinity role, which is especially stereotyped as “men do not cry”, affect males in a way that they are excluded and accepted by society. In the light of this information added to the literature by cultural studies, it should be remembered that men may need to hide their emotions in terms of visibility of

caregiver burden experience while women play more active roles and gain resources in caregiving process (Çelik, 2016).

In another point, it was noteworthy that 63.5% of the participants were married, only 28.1% were single and 8.3% were divorced or lost their spouses. In addition, it is important that the majority of caregivers are family members. The number of caregivers of the participants is 4, whereas the number of caregivers with family members is 92. The biggest percentage of these rates are the ones who give care to their mothers with the rate of 45.8%. 18,8% of the caregivers reported that they give care to their spouse. On the other hand, 72.9% of caregivers who participated in the study stated that they lived with the patient to whom they care. All this information emphasizes that it is correct to explain the findings of the study from the family system and systemic perspective. The experience of giving care is a concept that is perceived to be multidimensional in terms of caregiving individuals and contains many difficulties and different experiences. This experience adds to the person's positive traits such as increase in sincerity and love, meaningfulness through caregiving experience, personal development, getting social support from other individuals, self-esteem, personal satisfaction and creating social support (Toseland, Smith & McCallion, 2001). Considering the achievements of the caregivers, it is seen that the concept of gain in Hobfoll's theory of conservation, which is one of the theories on which this very study is based, is not as important as the loss of resources. Depending on the effects of stress factors, one of the basic principles of this theory that focuses on the loss and gain of resources emphasizes that gain of resources only becomes meaningful when there is a loss of resources (Hobfoll, 1998; Wells, Hobfoll & Lavin, 1999). The role and meaning of the disease in the family system is not only a condition that takes the patient into the sphere of influence, but it is also a life event that deeply affects the whole system. In particular as a chronic disease of cancer patients, in the light of the fact that caring for family members, caregivers perceive a significant level of stress. Thus, with the impact of this health loss, it can be considered that the process would lead to more meaningful gains (Yıldız, Dedeli & Pakyüz, 2016).

The first of the main hypotheses of the study was set to look at the correlation between the increase in resources and the caregiver burden. Findings at this point are interpersonal resources general, one of the subscales of the increase of resources scale. According to the research results, as the general interpersonal resources increase, the caregiver burden decreases (See Table 12). It is important to focus on what these sources are, as item expressions, and how these resources, which are seen to be effective in reducing the caregiver burden, can strengthen the caregivers. The effect level is found significant by not only the correlation analysis but also the effect of the regression analysis results means. This means interpersonal general resources have significant effect on caregiver burden. At this point, as a result of both correlation and regression analysis, what has gained a significant dimension is the fact that general relational factors which provide a strong argument decrease the caregiver burden in the context of the resource gain.

The first expression in the Interpersonal resources general subscale is the feeling that one is valuable for others. The feeling that a person is valuable is not a concept that can be handled only individually. The individual can feel well, valuable, and safe as a result of the system in which he or she is interacting with the system. This situation is also seen in the literature with similar expressions. For example, in a study where Andersen and White (2018) shared their experiences with caregivers of chronic disease patients, they define the caregivers' feeling of self-esteem through increased levels of closeness with the patient, satisfaction with the relationship with which the spiritual gains increased, and increased sense of appreciation to other family members, and positive effects of developing family relationships. Another study that provides supportive information on this issue has the emphasis on personal and relational resources about the benefits of caregiving. Giving care has positive contributions such as feeling the fulfillment of their responsibilities to people, experiencing the satisfaction of relationships that are more meaningful and highly spiritual, feeling a sense of completeness, learning to be more patient, feeling peace of mind, feeling the worth of personal satisfaction, getting closer to the patient than ever before, but most importantly, being together with your beloved as long as possible (Ross, Holliman & Dixon, 2003). Based on

this information, from the sources of interpersonal general resources found to be significant in the study, it is possible to talk about the gains of feeling valuable to the other person. In particular, achieving inner peace, personal satisfaction and caregiver's achievements in the process of accomplishing the treatment all contribute great supports to the relationship between decrease in caregiver burden and gain in interpersonal general resources.

The definition of the source in the other item is given as closeness with at least one friend. This makes us think about the positive effects of relational needs and relationships on the person from the systemic perspective. At this point, it is useful to mention the source of friendship, which has a very similar meaning. Another item of interpersonal resources, which is the subscale of the gain of resources scale, is given as friendship. According to McCubbin's study in 2002, looking at the experience on the concept of friendship, the following expressions were used by caring family members: In the moments of the confrontation with the disease, it was emphasized that in the moments of hard and shock, friends, siblings, relatives, neighbors and other family members were present, and without them, the difficulty of this process would be unbearable. In addition, the presence of the same people while the parents quickly reorganize the entire system for the treatment of the disease reiterate their positive contribution to the process. Thus, the biggest supporting factor of the situation that accelerates the reorganization of the family against this health loss crisis and increases the adaptation to new roles emerges as the support received from relations (McCubbin et al, 2002). At this point, it is useful to consider the other items of the interpersonal resources general subscale, the friendship and loyalty of friends, and the resources of love and compassion from others. The common ground for all these items arises as the orientation of systemic family therapy to family systems that are oriented. At this point, the family is more than the system and all the parts that constitutes the unit itself and more of the features of these parts (Barker, 1998). In this context, an event that affects the system as a whole will affect the members individually. At the same time, in an opposite way, the events affecting the individual would be felt by the system (Rando, 1984). As a result of this study, even though Interpersonal Resources

Family are not included among the findings as a significant sub-hypothesis, Interpersonal Resources General encourage us to think about the system in which the patient and the caregiver are involved. When a member of the system has a serious illness, there is a change in the homeostatic balance of the system, and in the event of this imbalance, the system tends to adapt to the new situation. At this point, not only the family members, but each individual who are identified as closely-related as well as the other members of the system can also take an active role. Just as socially emphasized that support from a friend, mate, or neighbor would sometimes be as important as support from the family. Herein, new instances of the gain of resources of individuals whose resources gain can be emphasized as the system being able to act quickly, tolerating what has happened, adapting them, focusing on the process of leaving the family members and close relatives, the flexibility of the family in the process, cooperation, the strength and adaptation in terms of establishing a new organization (Rando, 1984). As one of the principles of Hobfoll's (1989) theory of conservation of resources emphasizes that the increase of resources will only be meaningful with a loss of resources, and here there is an argument reminding us again of the information about strengthening the system against stressful situations and creating resilience in individuals, which, actually emerges after the loss of health (Herbert & Cohen, 1993). The first steps of coping with and adapting to a chronic disease are directed not only to the patient, but to create a model that includes everyone affected psychosocially (Walsh, 1983). At this juncture, another factor that supports research findings is an item of the interpersonal resources general subscale. The fact that the resource called as participation in organizations with similar interests increases has an effect on caregiver burden by decreasing it shows that everyone who is affected psychosocially from the disease meets on a common ground in coping and adaptation.

Also, there are additional findings that consider the positive aspects of positive aspects of caregiving (Greenberg, Seltzer, & Greenley, 1993, Kramer, 1993a; 1993b; Miller, 1989; Motenko, 1989; Stephens, Franks, & Townsend, 1994). Although there are limited or no findings related to caregivers of cancer

patients and the gain of resources, positive impacts of giving care for patients with different illnesses such as AIDS (Ferrari, McCown, & Pantano, 1993; Wardlaw, 1994), schizophrenia (Bulger, Wandersman, & Goldman, 1993), traumatic brain injury (Allen, Linn, Gutierrez, & Wilier, 1994), developmental disabilities and mental illness (Greenberg et al., 1993) are increasing in the literature. These studies about caregiving with other chronic illnesses shows more positive psychological functioning are gained because the family and health system need a wholesale rethinking about caregiving knowledge and consequence to include benefits of caregiving and positive express of well-being (Kramer, 1997).

In the scale of resource gain applied to the caregivers, another highlighted factor that makes social support mechanisms strong and holds the system together is that the resource called as the people from whom one can learn something. McCubbin (2002) emphasizes that caregivers develop durability along with the support they receive from the health care team and that this is as large as 88% of families. The most important features of these supports taken from the healthcare team, and which create durability, are distributed to a total of 3 main criteria. The first of these is to provide realistic hope and concern, second is to support access to information and help, and the third is respect to families by the healthcare team (McCubbin et al., 2002). The aforementioned resource regarding the increase in the level of information gathering may in fact support the awareness of caregivers, raise awareness and be more sensitive to the health of family members and close friends. Interpersonal Resources General, which is the subscale significant at the level of resource gain of this connection, re-exposes the effect level and regression in terms of reducing the caregiver burden and responds to sub-hypotheses in the basic hypotheses of this research.

One interesting finding in this study was that there was no significant relationship found between interpersonal family resources and caregiver burden. A possible explanation can be found in the trauma literature. Catastrophic life events such as serious health problems and chronic illness can be very distressing and troubling since they are sudden, dangerous and overwhelming (Figley, 1975). Cancer as a very serious health problem can be traumatic for the patient and the

care giver of the patient because the illness appears so sudden with no or little warning. Facing such a sudden event leave both patient and family members in an unprepared, unrehearsed for the new situation and temporary immobilised (Figley, 1986). Catastrophic life experiences also evokes the sense of danger either for ourselves or the people we love and care even though we don't experience the traumatic event. Traumatic events such as witnessing a chronic illness of a close one can also be overwhelming because of their sudden and dangerous nature. As a result, family members can experience helplessness, feeling out of control, panic and inconsistent with their self-concept. All these emotions consequence of facing cancer as a family member may lead them to behave in a way that is not common for themselves such as escaping or keeping distance from the patient (Figley, 1986). It is not uncommon to see that the closest family members put distance to their relationship with their cancer patient relatives. In order to protect themselves from the possible traumatic effects uncounciously.

Up to this point, we have discussed one of the most important findings of the study in the literature on the basis of systemic perspective and resource conservation theory that interpersonal general resources has an influence in reducing caregiver burden. Another significant result of correlation and regression is that caregiver burden increases as there is a gain in material resources. Material resources are defined on the scale used in this research with the following items; personal transportation opportunities, adequate clothing, more clothes than one needs, necessary home appliances, adequate housing for one's needs, adequate nutrition, a home larger than necessary, adequate home furnishings, meeting the basic needs of children, children's additional needs, savings for emergencies, investment properties, economic stability and pension security. All of these factors are in fact effective factors in income levels and economic well-being of caregivers. As seen in the ANOVA test results of the study on demographic information, the relationship of family income with energy sources is clear. This information shows us that the income levels of the participants are above average and that the individual is gaining material resources. Out of 96 participants in the study, 67 of them earn 5,000 £ or more. The annual equivalised household disposable income

that Turkey Statistical Institute reported for the year 2017 is 21 577 ₺. As a result of this, the monthly income of the families is 1800 ₺ in the country average.

Thus, it is possible to conclude that the participants of this research are on the middle and upper level of the family income status. As we have seen in the result of the correlation and regression, material resources are negatively correlated with caregiver burden, and material resources have a significant effect on caregiver burden. This suggests the effect of income level and material resources in this study. In other words, the increase in the opportunities and facilities an individual has, by their very nature, lead to more workloads and increase the actions that can be undertaken.

#### **4.2. Strengths and Limitations**

There are some significant limitations encountered during the realization of this study and in the analysis process. The first one is that the relationship between the variables of the study has no claim to causes and effects due to the cross-sectional design of the study. In other words, this study measured the relationship between the gain of resources and the caregiver burden variants, and the independent variables (including subscales), dependent variable and demographic information factors, which measured the regression effect. This means that it is not intended to measure a cause - effect relationship.

Another limitation is the characteristics of the sample. The participants were the relatives and caregivers of the patients treated in outpatient chemotherapy service, living in Bahçeşehir districts of Istanbul province. The participants who were selected with snowball sampling method had a number of similarities in terms of demographic characteristics such as area of residence, income level, and education level. Especially for this reason, it is not possible to generalize the results of this study to the whole population. Another limitation is the difference in percentage between female and male participants. The participation of male caregivers is quite low in comparison to females. As for the income level of the participants, compared to average of Turkey, it is similar to the economic level of the general population. Among the other features of the study being cross-sectional,

some very important factors are having limited time, a limited population with a limited number of participants, but still less than expected. In addition, the fact that the cancer process is a highly sensitive subject, the number of items given in the scales are high, and the chemotherapy service is carried out in the waiting room are among the factors that limit the results. Following the observation of the population and cultural factors, inter-item correlations of all scales and subscales were examined in order to achieve a more consistent and reliable study; and also data cleaning was performed to achieve more powerful results in terms of consistency and reliability. One of the most noticeable items in data cleaning is culturally religious and spiritual resources. Although it is a prominent factor for people in stressful life events, involving in religious activities is important for the reliability of the study to be removed from the questionnaire in terms of internal consistency. Regarding this, Ross, Holliman & Dixon (2003) emphasize that one of their common characteristics is the increase of religious beliefs in the treatment process, as it is the predominant population of the resilient high family caregivers in this study.

In one of the findings of the same study, caregivers always received support from prayer, reading sessions, and belief systems they were attached to, even if they could not always go to a place of worship. The caregivers see the belief in God or another power as resources that make them strong. In this context, although the importance of the spiritual side is revealed, in the context of the research, data cleaning was performed for this item to ensure a good inter item correlation score. In the standardization of the gain of resources scale within COR-E in Turkey, this item is used as translating the phrase participation in activities in places such as mosques and churches. When the cultural context is examined, it is of great importance that the predominantly majority of the Turkish population, especially women prefer to worship at home rather than participating in the activities of worship in a temple. Despite the fact that participants being predominantly female is another limitation of the study, it is thought to be a factor affecting the response to the question about participation in religious activities in a temple. In an atmosphere perceived normative as men are more active in the rate of participation

in the activities in mosques, it was thought that answers given to this question may have lost credibility.

Despite the limitations of the study, some strengths are quite important and remarkable. First of all, it is important to know that the literature is mostly dominated by studies about the loss of resources. The burden of caregiving is a life event that is on the rise with the increasing rates of chronic diseases and our country and throughout the world. Therefore, it is an important strength to emphasize that people living in this challenging process can experience not only loss of resources, but also gain of resources. This feature of the study can be thought of as a step to determine the effect of the increasing resources on the reduction of the caregiving burden and to guide the increase of other resources. In addition, it can be said that for all the health care professionals, physicians, therapists, as well as individuals, families and social support mechanisms, this study could encourage and contribute to the gain of other resources.

### **4.3. Clinical Implications**

In order to be used in the clinical setting, it is useful to examine the information obtained from this study together with the systemic perspective. First, in their implications on burnout, clinical psychologists, therapists and other mental health professionals should use their clients' strengths and resources to integrate them with systemic psychotherapy. It is useful to treat the disease with a holistic perspective that deals with the meaning of the system, not the reductionist approach. In addition, medical family therapy approach, a model of systemic psychotherapy, treats the chronic disease together with the whole system in which the person is involved. At this point, medical family therapy applications and intervention techniques need to be adapted in the light of the findings of this research study. According to the results of the research, the most important result is the negative correlation between the interpersonal resources general and the caregiver burden of the first hypothesis. This relationship shows that an effect that reduces the caregiver burden of the caregiver is only possible with the increase of the Interpersonal

Resources General. It is very important that the general relational resources of the caregiver are studied in the therapy process and that these studies have a systemic point of view that includes the health system and the family, and that the caregiver can have space for important points. A process of psychosocial support for the general relational resources of the individual may also contribute to reducing the burden of caregivers, especially with narrative therapy interventions aimed at highlighting strengths. In addition, in order to support the increase in the resources of caregivers, especially when involved in a medical treatment process, the following specific stages suggested by medical family therapy may make the process more efficient:

- \* to become aware of the size of the disease and to inform the family system at this point,

- \* to examine the history of the disease not only according to the life of the individual, but within the system in which it is located,

- \* to respect and communicate defense mechanisms, and to involve empowerment interventions to the subjectivity of individuals,

- \* to process interpersonal relationships in a session and to prioritize the sense of subjectivity both in the patient and in the family,

- \* to put the disease in a context together with all the relations in the family and the ones who are not family members but still included in the system during the treatment process,

- \* to make interventions so as to save the family identity, adapt and develop the concept of individual self.

These intervention techniques and the interactive process of treatment offered by medical family therapy can be helpful in reducing the burden of caregivers while contributing to, strengthening and increasing the resources of the individual. Also, participation of the entire health system in the treatment process, caregiver's experience, perception of the disease, and family dynamics are all taken into consideration. In this sense, the widespread use of this model can have a positive effect on reducing the burden of caregiver.

At this point, it is useful to develop comments not only for the interpersonal resources general and family resources, but also for the other resources in the COR theory on medical family therapy model and the other interventions that might be applied. One of the most important contribution of this study is that developing new interventions for increasing caregiver burden for caregivers to cancer patients. In the light of this finding, it is possible that the caregiver burden would decrease if other resources increase. At this point, it is especially important to focus on work, energy, personal resources (well-being, mastery, self-esteem). For work and energy resources, organizing seminars and information programs for coping stress and developing new coping skills in caregiving process might be the way of gaining new resources in practice.

Planning of sharing groups for caregivers, informing them about the process and raising their awareness may constitute a protective measure that affects both the patient and the patient's psychological well-being. Apart from preventive treatment, it is important to pay particular attention to the following three steps in terms of clinical practice. The first of the three phases are assessment. At this stage, it is important to evaluate the situation of the relatives of the patients, whether they are at risk or not, and to think about the applications to decrease the caregiver burden. In the next stage, it is useful to focus on prevention. This can be summarized as the development of in-house, in-hospital practices, group therapies, and psychosocial training for caregivers. They can also participate in the practices developed for the caregivers and patients by the municipal health centers, mental health units and health directorates, which provide free treatment. In the final stage, the phase of treatment, the medical family therapy model and systemic psychotherapy school, as mentioned above, can be utilized to conserve the resources of the caregivers and to reduce their burden. Finally, it is vital to organize trainings, seminars and information sessions on the moral investments for the future caregivers and to meet the patients' need of information.

#### **4.4. Future Directions**

Considering the findings and experiences obtained from this study, it can make a significant contribution to future studies when carried out with a sample that can be extended to a more general, by increasing socio-economic levels, equalizing gender distribution, and increasing the diversity of participants and their proximity levels. In addition, what can be seen in the experiences of non-family caregivers and what they experience about protection of resources can all be investigated with another research design. Furthermore, through future research, applications to be held in other cities in Turkey, comparative studies about the rural and urban dimensional differences, research studies carried out with larger populations rather than restricted areas and small regions will provide important contributions to this issue. Moreover, improving and realizing these studies in public hospitals as well as private ones would contribute a lot. In addition to all of these, new research studies can be designed with a focus on the differences between loss and gain of resources by giving a loss scale besides the gain of resources scale of COR-E. This can show us in a broader context how resources affect every aspect of caregiverburden. Finally, support group studies specific to different chronic diseases can be designed and focused on impact analysis. This may draw a significant roadmap for the development of preventive studies, new clinical applications can be developed together with developments of proven practices, based on the COR and BPS theories to reduce caregiverburden.

## CONCLUSION

The main purpose of this study was to explain the relationship between resource gain and caregiving burden by considering the disease and care-giving processes from the perspectives of Hobfoll's Conservation of Resources Theory and Biopsychosocial Approach. It was designed as a cross-sectional study on the experiences of the caregiver relatives of the patients who received healthcare in the outpatient chemotherapy floor of the hospital. In the literature, it was generally emphasized that the studies on loss of resources and the experiences about caregiving burden turned into negative experiences, ultimately aroused the interest of this study to examine the relationship between gain of resources and care burden. To start with, the first of the main hypotheses; it was expected that gain of resources would be related to the burden of caregivers, and thus, a correlation analysis was planned. At the same time, in the second main hypothesis, it was expected that the increase of resources had an effect on the caregiver's burden, and so regression analysis was planned. The planned hypothesis analyzes were planned not only for the main hypotheses but also for the 8 subscales of the gain of resources scale, and significant results were expected. As a result, to reach the meaningful results of descriptive information and ANOVA and T-test analyses were performed just as Pearson correlation and hierarchical regression analysis were performed to reach the significant results of the main and sub-hypotheses. In the light of these analyses and the findings obtained, the subscale of the gain of resources, Interpersonal Resources General were found to be correlated negatively with the caregiver burden; whereas, Material Resources and caregiver burden were positively correlated. Similarly, in the regression analysis, it was concluded that the same subscales; interpersonal resources general, material resources and gender variables predicted caregiver burden.

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## APPENDICES

### Appendix A: Demographic Form / Demografik Bilgi Formu

<b>Cinsiyetiniz</b>	<input type="checkbox"/> Kadın <input type="checkbox"/> Erkek <input type="checkbox"/> Belirtmek istemiyorum <input type="checkbox"/> Diğer
<b>Yaşınız</b>	.....
<b>Eğitim Düzeyiniz</b>	<input type="checkbox"/> Okur - Yazar <input type="checkbox"/> İlköğretim <input type="checkbox"/> Lise <input type="checkbox"/> Yüksekokul <input type="checkbox"/> Üniversite <input type="checkbox"/> Yüksek lisans ve üstü
<b>Medeni Durumunuz</b>	<input type="checkbox"/> Bekar <input type="checkbox"/> Evli <input type="checkbox"/> Eşinden Ayrı/Eşini Kaybetmiş
<b>Çocuk Sayınız</b>	<input type="checkbox"/> Çocuğum yok <input type="checkbox"/> ..... çocuğum var
<b>Ailenizin Gelir Durumu</b>	<input type="checkbox"/> 2000 TL ve altı <input type="checkbox"/> 5001-6000 TL <input type="checkbox"/> 8001-10000 TL <input type="checkbox"/> 2001-4000 TL <input type="checkbox"/> 6001-8000 TL <input type="checkbox"/> 10000 TL'den fazla
<b>Çalışma Durumunuz</b>	<input type="checkbox"/> Ev hanımı <input type="checkbox"/> Kamu Kurumunda Memur <input type="checkbox"/> Özel Sektörde Memur/Uzman (Bankacı vb.) <input type="checkbox"/> İşçi <input type="checkbox"/> Yönetici <input type="checkbox"/> Serbest Çalışan <input type="checkbox"/> İş Yeri Sahibi <input type="checkbox"/> Emekli <input type="checkbox"/> Öğrenci <input type="checkbox"/> İşsiz <input type="checkbox"/> Diğer..... (yazınız)
<b>Hasta İle Yakınlık Düzeyiniz</b>	<input type="checkbox"/> Çocuğum <input type="checkbox"/> Eşim <input type="checkbox"/> Annem-Babam <input type="checkbox"/> Kardeşim <input type="checkbox"/> Büyükkannem-Büyükbabam <input type="checkbox"/> Amcam/Teyzem/Dayım/Halam <input type="checkbox"/> Diğer
<b>Hastanın Tedavi Süresi</b>	<input type="checkbox"/> 6 aydan daha az <input type="checkbox"/> 6 ay-1 yıl <input type="checkbox"/> 1-2 yıl <input type="checkbox"/> 3 yıl ve daha fazla
<b>Bakım verdiğiniz kişi ile birlikte mi yaşıyorsunuz?</b>	<input type="checkbox"/> Evet <input type="checkbox"/> Hayır

<b>Bakım desteği için günde ortalama kaç saat ayırıyorsunuz?</b>	..... saat.
<b>Tedavi sürecinde psikolojik / psikiyatrik destek aldınız mı?</b>	( ) Evet ( ) Hayır • Evet ise bu tedaviyi ne kadar süre gördünüz / görüyorsunuz .....
<b>Şu an bir psikiyatrik ilaç kullanıyor musunuz?</b>	( ) Evet ( ) Hayır

### Appendix B: COR-E Scale / Kaynakların Değerlendirilmesi Ölçeği

Aşağıda insanların yaşamını etkilediği düşünülen bir dizi kaynak/imkan sıralanmıştır. Sizden yakınınızın tedavi sürecini düşündüğünüzde, bu alanlarda bir artış olup olmadığı, var ise ne derece bir artış yaşadığınız 1 ile 5 arasında derecelendirmeniz istenmektedir. Aşağıdaki sorular tamamen sizin hayatınızla ilgilidir, bakım verdiğiniz hastanın kişisel düşünceleri ve yaşantısı ile ilgili değildir.

**1: Hiç Artış Olmadı 2: Çok Az Artış Oldu 3: Orta Düzeyde Artış Oldu 4 : Ciddi Düzeyde Artış Oldu 5: Çok Yüksek Düzeyde Artış Oldu**

KAYNAKLARIM				
1.Kişisel ulaşım olanağı (Araba, minibüs, vs.)	1	2	3	4 5
2.Başarılı olduğum hissi	1	2	3	4 5
3.Yeterli uyku için zaman	1	2	3	4 5
4.Iyi bir evlilik	1	2	3	4 5
5.Yeterli giyim	1	2	3	4 5
6.Diğerleri için değerli olduğum hissi	1	2	3	4 5
7.Düzenli aile yaşantısı	1	2	3	4 5
8.Boş zaman	1	2	3	4 5
9.İhtiyacım olandan daha fazla giyecek	1	2	3	4 5
10.Kendimle gurur duymak	1	2	3	4 5
11.Bir ya da daha çok aile üyesi ile yakın/samimi ilişki	1	2	3	4 5

12.İşe ayrılan zaman	1	2	3	4	5
13.Hedeflerimi gerçekleştiriyorum hissi	1	2	3	4	5
14.Çocuklarımla iyi ilişki	1	2	3	4	5
15.Sevdiklerinle zaman geçirme	1	2	3	4	5
16.İş için gerekli araç-gereç	1	2	3	4	5
17.Umut	1	2	3	4	5
18.Çocukların sağlığı	1	2	3	4	5
19.Dayanma gücü / Katlanma	1	2	3	4	5
20.Gerekli ev aletleri	1	2	3	4	5
21.Gelecekteki başarılarımın bana bağlı olduğu hissi	1	2	3	4	5
22.Olumlu yönde zorlayan günlük yaşantı.	1	2	3	4	5
23.Kişisel sağlık	1	2	3	4	5
24.İhtiyaçlarıma uygun barınma	1	2	3	4	5
25.Iyimserlik	1	2	3	4	5
26.İşteki statü/kıdem	1	2	3	4	5
27.Yeterli yiyecek	1	2	3	4	5
28.İhtiyacım olandan daha geniş ev	1	2	3	4	5
29.Mizah duygusu	1	2	3	4	5
30.İstikrarlı/devamlı iş	1	2	3	4	5
31.Eş ya da birlikte olduğum kişi ile yakınlık	1	2	3	4	5
32.Yeterli ev mobilyası	1	2	3	4	5
33.Yaşamım üstünde kontrolüm olduğu hissi	1	2	3	4	5
34.Lider rolü	1	2	3	4	5
35.İyi iletişim kurabilme	1	2	3	4	5
36.Çocukların temel ihtiyaçlarını karşılayabilme	1	2	3	4	5
37.Huzur dolu bir yaşamım olduğu hissi	1	2	3	4	5
38.Başarılarımın takdir edilmesi	1	2	3	4	5
39.Yapılacakları/işleri organize edebilme	1	2	3	4	5
40.Çocukların ek ihtiyaçları	1	2	3	4	5
41.Kendini bir şeye adama hissi	1	2	3	4	5

42.En az bir arkadaş ile yakınlık	1	2	3	4	5
43.Ekstra harcamalar için para	1	2	3	4	5
44.Öz disiplin	1	2	3	4	5
45.İşverenim/patronumdan anlayış	1	2	3	4	5
46.Acil durumlar için maddi birikim	1	2	3	4	5
47.İşleri tamamlama motivasyonu	1	2	3	4	5
48.Eş / Birlikte olduğu kişinin sağlığı	1	2	3	4	5
49.Çalışma arkadaşlarının desteği	1	2	3	4	5
50.Yeterli gelir	1	2	3	4	5
51.Kim olduğunu bilme hissi	1	2	3	4	5
52.Öğrenim ya da iş eğitiminde gelişim	1	2	3	4	5
53.Yeterli finansal kredi	1	2	3	4	5
54.Bağımsızlık hissi	1	2	3	4	5
55.Dostluk	1	2	3	4	5
56.Maddi yatırım (hisse senedi, taşınmaz mülk, vs.)	1	2	3	4	5
57.Hayatta nereye doğru gittiğini bilme	1	2	3	4	5
58.Diğerlerinden sevgi/şefkat görme	1	2	3	4	5
59.Ekonomik istikrar	1	2	3	4	5
60.Yaşamımın bir anlamı/amacı olduğu hissi	1	2	3	4	5
61.Kendimle ilgili olumlu hisler	1	2	3	4	5
62.Birşeyler öğrenebileceğim kişiler	1	2	3	4	5
63.Ulaşım için gerekli para	1	2	3	4	5
64.İşteki görevlere yardım	1	2	3	4	5
65.Sağlık sigortası	1	2	3	4	5
66.Cami, kilise gibi mekanlardaki aktivitelere katılım	1	2	3	4	5
67.Emeklilik güvencesi (Ekonomik)	1	2	3	4	5
68.Ev işlerinde yardım	1	2	3	4	5
69.Arkadaşların bağlılığı / Sadakati	1	2	3	4	5
70.İlerleme ve bireysel gelişim için para (eğitim, iş kurma, vs)	1	2	3	4	5
71.Çocukların bakımında yardım	1	2	3	4	5

72. Benzer ilgileri olan kişilerle ortak organizasyonlara katılım	1	2	3	4	5
73. İhtiyacım olduğunda alabileceğim maddi destek	1	2	3	4	5
74. Aile bireylerinin/yakın arkadaşların sağlığı	1	2	3	4	5

### Appendix C: Caregiver Burden Scale / Zarit Bakım Veren Yükü Ölçeği

Aşağıda yakınlarına bakım veren bireylerin yaşadıkları süreçlere dair bazı sorular sorulmuştur. Soruları cevaplandırırken düşüncelerinizi ve duygularınızı, 1 ile 5 arasındaki rakamlardan birini seçerek belirtiniz.

#### 1: HİÇ 2: NADİREN 3: BAZEN 4: SIK SIK 5: HER ZAMAN

1. Yakınınızın ihtiyacı olduğundan daha fazla yardım istediğini düşünüyor musunuz?	1	2	3	4	5
2. Yakınınıza harcadığınız zamandan dolayı, kendinize yeterince zaman ayıramadığınızı düşünüyor musunuz?	1	2	3	4	5
3. Yakınınıza bakım verme ile aile ve iş sorumluluklarınızı yerine getirme arasında zorlandığınızı düşünüyor musunuz?	1	2	3	4	5
4. Yakınınızın davranışları nedeniyle rahatsızlık duyuyor musunuz?	1	2	3	4	5
5. Yakınınızın yanındayken kendinizi kızgın hissediyor musunuz?	1	2	3	4	5
6. Yakınınızın diğer aile üyeleri ya da arkadaşlarınızla ilişkilerinizi olumsuz yönde etkilediğini düşünüyor musunuz?	1	2	3	4	5
7. Geleceğin yakınınıza getirebileceklerinden korkuyor musunuz?	1	2	3	4	5
8. Yakınınızın size bağımlı olduğunu düşünüyor musunuz?	1	2	3	4	5
9. Yakınınızın yanındayken kendinizi gergin hissediyor musunuz?	1	2	3	4	5
10. Yakınınızla ilgilenmenin sağlığını bozduğunu düşünüyor musunuz?	1	2	3	4	5
11. Yakınınız nedeni ile özel hayatınızı istediğiniz gibi yaşayamadığınızı düşünüyor musunuz?	1	2	3	4	5
12. Yakınınıza bakmanın sosyal yaşamınızı etkilediğini düşünüyor musunuz?	1	2	3	4	5
13. Yakınınızın bakımını üstlendiğiniz için rahatça/kolay arkadaş edinemediğinizi düşünüyor musunuz?	1	2	3	4	5

14. Yakınınızın sizi tek dayanağı olarak görüp, sizden ilgi beklediğini düşünüyor musunuz?	1	2	3	4	5
15. Kendi harcamalarınızdan kalan paranın yakınınızın bakımı için yeterli olmadığını düşünüyor musunuz?	1	2	3	4	5
16. Yakınınıza bakmayı daha fazla sürdüremeyeceğinizi hissediyor musunuz?	1	2	3	4	5
17. Yakınınız hastalandığı zaman yaşamınızın kontrolünü kaybettiğinizi düşünüyor musunuz?	1	2	3	4	5
18. Yakınınızın bakımını bir başkasının üstlenmesini ister miydiniz?	1	2	3	4	5
19. Yakınınız için yapılması gerekenler konusunda kararsızlık yaşıyor musunuz?	1	2	3	4	5
20. Yakınınız için daha fazlasını yapmak zorunda olduğunuzu düşünüyor musunuz?	1	2	3	4	5
21. Yakınınızın bakımında yapabileceğiniz işin en iyisini yaptığınızı düşünüyor musunuz?	1	2	3	4	5
22. Yakınınıza bakarken genellikle ne kadar güçlük yaşıyorsunuz?	1	2	3	4	5

#### **Appendix D: Inform Consent Form /Bilgilendirilmiş Gönüllü Onam Formu**

Bu araştırma İstanbul Bilgi Üniversitesi Klinik Yüksek Lisans Programı / Çift Aile Terapisi Alt Dalı bünyesinde Dr. Öğr. Üyesi Senem Zeytinoğlu danışmanlığında, Duygu Başak Gürtekin tarafından yürütülmektedir. Bu çalışmanın amacı, kanser hastalığı tedavi sürecinde, hasta yakınlarında kaynakların korunmasının bakım veren yüküne etkisini incelemektir.

Bu çalışmaya katılmanız durumunda uygulayacağınız anketlerin, tedavi süreci ve yaşam kalitenizde olumlu ya da olumsuz bir etkisinin olmayacağı beklenmektedir. Öte yandan, uygulanacak olan bu anketler, hastaya bakım veren kişilerin yükü ve kaynakları üzerine yapılan çalışmalar için geleceğe yönelik bilimsel katkı sağlayacaktır. Bu bilimsel katkılar, kanser hastalarına bakım veren kişilerin ruh sağlığı ile ilgili koruyucu çalışmalar geliştirilmesini destekleyecek niteliktedir. Bu araştırmaya katılım, gönüllülük esasına dayanmakla birlikte, sizlere dilediğiniz

zaman arařtırmadan çekilme hakkı tanımaktadır. Arařtırmaya katılmayı onaylamanız durumunda, sizlere verilen anketleri eksiksiz bir şekilde tamamlamanız beklenmektedir. Anket toplamda 3 bölümden oluşmaktadır ve tamamlanması 25-30 dakika sürmektedir. Cevaplayacağınız soruların içtenlikle yanıtlanması arařtırmaya büyük katkı sağlayacaktır. Arařtırmanın hiçbir aşamasında kişisel bilgileriniz ve verdiğiniz cevaplar hiçbir kurum veya kişi ile paylaşılmayacak ve arařtırmacı tarafından korunacaktır. Arařtırma anketleri bir dosya olarak sizlere üzeri önceden numaralandırılmış bir şekilde verilecek ve anketler tamamlandıktan sonra geri alınacaktır. Toplanan anketler, arařtırmacı tarafından kişisel bilgiler içermeksizin bilimsel verilere dönüřtürülerek, yüksek lisans tezi ve ilgili bilimsel çalışmalarda yayınlanacaktır. Uygulanacak olan anketler bireysel bir değerlendirme değildir, anket sonuçları anonim şekilde değerlendirilecektir. Bu soruların sizde bir rahatsızlık uyandırması durumunda anketi yarıda bırakabilir veya soruları cevaplamayabilirsiniz, arařtırmacı tarafından size gerekli açıklama ve yönlendirmeler yapılacaktır. Katılımınız yakınınızın tedavisini olumlu ya da olumsuz yönde etkilemeyecektir.

Arařtırmayla ilgili merak ettiğiniz tüm bilgi ve sorularınızı Psikolog Duygu Başak Gürtekin'e **info@duygubasakgurtekin.com** adresinden ulařtırabilirsiniz. Yukarıda verilen bilgiler ışığında arařtırmaya katılma durumunuzu belirtiniz.

- ( ) Arařtırmayla ilgili bilgileri okudum ve katılmayı onaylıyorum.
- ( ) Arařtırmaya katılmayı kabul etmiyorum.

## Appendix E: Approval from Istanbul Bilgi University Human Subjects Ethics Committee

### ETİK KURUL DEĞERLENDİRME SONUCU/RESULT OF EVALUATION BY THE ETHICS COMMITTEE

(Bu bölüm İstanbul Bilgi Üniversitesi İnsan Araştırmaları Etik Kurul tarafından doldurulacaktır /This section to be completed by the Committee on Ethics in research on Humans)


**Başvuru Sahibi / Applicant:** Duygu Başak Gürtekin

**Proje Başlığı / Project Title:** The Effect of Conservation of Resources on the Burden of Family Caregivers to Cancer Patients


**Proje No. / Project Number:** 2018-20024-133

1.	Herhangi bir değişikliğe gerek yoktur / There is no need for revision	XX
2.	Ret/ Application Rejected Reddin gerekçesi / Reason for Rejection	


Değerlendirme Tarihi / Date of Evaluation: 13 Aralık 2018

  
Kurul Başkanı / Committee Chair

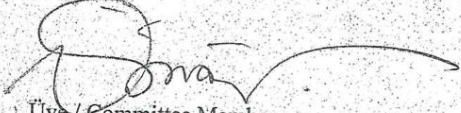
Doç. Dr. İtir Erhart

  
Üye / Committee Member


Prof. Dr. Hale Bolak

  
Üye / Committee Member


Prof. Dr. Koray Akay

  
Üye / Committee Member

Prof. Dr. Ayhan Özgür Toy

  
Üye / Committee Member

Prof. Dr. Aslı Tunç

  
Üye / Committee Member

Prof. Dr. Turgut Tarhanlı

  
Üye / Committee Member

Prof. Dr. Ali Demirci

## Appendix F: Permission from Istinye University Bahçeşehir Liv Hospital

01.12.2018

### İstinye Üniversitesi Hastanesi Liv Hospital Bahçeşehir Yönetimi'ne,

İstanbul Bilgi Üniversitesi, Sosyal Bilimler Enstitüsü, Klinik Psikoloji Yüksek Lisans Programları, Çift - Aile Terapisi Alt Dalı öğrencisiyim. Konusu: "Kanser Hastası Yakınlarında Kaynak Artışının, Bakım Veren Yükü ile İlişkisi" olan uzmanlık tezimi Dr. Öğretim Üyesi Senem Zeytinoğlu Saydam danışmanlığında yürütmekteyim. Söz konusu araştırma kapsamında, İSU Liv Hospital Bahçeşehir Onkoloji Bölümü, Ayaktan Kemoterapi Servisi'nde hasta yakınlarına uygulamak üzere anketler düzenlenmiştir. Çalışmayı gerçekleştirmek ve İstanbul Bilgi Üniversitesi etik kurul onayını alabilmek için gerekli araştırma izinin tarafınızdan verilmesini talep ediyorum.

Gereğinin yapılmasını arz ederim.

Duygu Başak Gürtekin  
Psikolog

İstinye Üniversitesi Hastanesi  
Psik. Duygu Başak GÜRTEKİN  
Branş: Psikolog  
Diploma Tescil No: 19338

  
İstinye Üniversitesi Hastanesi  
Sağlık Uzmanları Odası (SOM) Merkezi  
Başkanı (Mes. M. Müdür)  
D. A. Organ OKUR  
Dip. Tescil No: 121119  
T. No: 2918  
Liygundur.

**Appendix G: Tables Related to Inter-Item Correlations According to Sub-Scales of the Gain of Resources Scale**

**Table 17. Item-Total Statistics for Material Resources**

<b>Item-Total Statistics</b>					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
KDÖ1	21,84	53,186	,488	,457	,841
KDÖ5	21,82	52,610	,589	,552	,836
KDÖ9	22,01	54,916	,498	,373	,841
KDÖ20	21,50	52,968	,447	,545	,843
KDÖ24	21,49	49,053	,644	,629	,830
KDÖ27	21,53	51,199	,646	,572	,831
KDÖ28	21,70	51,013	,519	,638	,839
KDÖ32	21,66	50,375	,644	,653	,831
KDÖ36	21,41	54,033	,357	,444	,849
KDÖ40	21,53	54,378	,338	,423	,850
KDÖ46	21,33	54,056	,361	,283	,849
KDÖ56	22,10	55,484	,570	,475	,841
KDÖ59	21,49	52,695	,503	,513	,840
KDÖ67	21,65	53,431	,449	,510	,843

<b>Reliability Statistics</b>		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,774	,778	6

**Table 18. Item-Total Statistics for Personal Resources Self-esteem**

<b>Item-Total Statistics</b>					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
KDÖ2	15,38	15,563	,464	,455	,757
KDÖ10	14,68	14,937	,703	,522	,696
KDÖ13	15,73	14,915	,516	,346	,743
KDÖ35	14,14	17,781	,382	,436	,771

KDÖ51	14,80	15,613	,587	,399	,724
KDÖ61	14,55	16,081	,499	,419	,746

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,774	,778	6

**Table 19. Item-Total Statistics for Personal Resources Well Being**

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
KDÖ17	14,61	14,997	,619	,462	,777
KDÖ25	15,09	15,686	,675	,502	,767
KDÖ29	16,18	16,379	,607	,401	,781
KDÖ37	15,90	15,652	,575	,348	,787
KDÖ57	15,78	16,699	,476	,280	,808
KDÖ60	14,68	16,263	,534	,299	,796

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,815	,818	6

**Table 20. Item-Total Statistics for Personal Resources Mastery**

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
KDÖ21	19,77	20,031	,431	,395	,734
KDÖ33	19,83	20,456	,466	,357	,722
KDÖ39	18,69	20,786	,519	,559	,710
KDÖ41	18,44	23,175	,331	,399	,748
KDÖ44	19,44	20,270	,690	,503	,679
KDÖ47	19,20	21,550	,426	,347	,730
KDÖ54	19,95	21,545	,462	,377	,722

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,751	,759	7

**Table 21. Item-Total Statistics for Work Resources**

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
KDÖ16	18,32	31,505	,346	,265	,766
KDÖ22	17,81	30,533	,384	,298	,762
KDÖ26	18,41	29,675	,621	,483	,738
KDÖ30	18,06	28,859	,491	,510	,748
KDÖ34	16,46	29,619	,384	,374	,763
KDÖ38	17,31	29,880	,372	,331	,764
KDÖ45	18,05	28,955	,496	,626	,747
KDÖ49	17,90	28,115	,494	,655	,747
KDÖ52	18,14	31,024	,291	,242	,775
KDÖ64	18,14	28,897	,603	,473	,736

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,774	,782	10

**Table 22. Item-Total Statistics for Energy Resources**

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
KDÖ3	23,61	32,260	,256	,531	,685
KDÖ8	23,70	30,845	,435	,592	,668
KDÖ12	23,35	31,305	,258	,226	,685
KDÖ15	21,84	31,628	,056	,322	,735
KDÖ19	21,11	34,945	-,109	,130	,734

KDÖ23	23,04	28,735	,489	,506	,653
KDÖ50	23,18	28,189	,537	,562	,646
KDÖ43	22,75	26,611	,489	,419	,647
KDÖ65	23,02	28,400	,404	,359	,663
KDÖ53	23,57	31,026	,406	,517	,670
KDÖ63	23,31	29,164	,532	,447	,651
KDÖ70	23,47	29,873	,409	,295	,665
KDÖ73	23,28	30,836	,313	,320	,678

#### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,694	,729	13

**Table 23. Item-Total Statistics for Interpersonal Resources – Family**

#### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
<u>KDÖ4</u>	18,84	34,407	,735	,679	,727
<u>KDÖ7</u>	18,32	39,105	,360	,501	,783
<u>KDÖ11</u>	17,91	36,802	,453	,520	,770
<u>KDÖ14</u>	18,60	35,210	,577	,567	,750
<u>KDÖ18</u>	19,35	40,105	,427	,472	,772
<u>KDÖ31</u>	18,16	35,586	,589	,454	,748
<u>KDÖ48</u>	19,31	40,786	,328	,355	,784
<u>KDÖ68</u>	19,10	40,557	,359	,187	,780
<u>KDÖ71</u>	19,40	39,779	,441	,289	,770

#### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,786	,785	9

**Table 24. Item-Total Statistics for Interpersonal Resources – General**

<b>Item-Total Statistics</b>					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
KDÖ6	25,45	38,545	,196	,206	,750
KDÖ42	24,98	28,842	,725	,628	,654
KDÖ55	24,40	35,042	,437	,384	,714
KDÖ58	25,11	32,145	,739	,649	,669
KDÖ62	25,08	32,351	,559	,637	,692
KDÖ66	25,11	39,492	,040	,147	,789
KDÖ69	25,08	31,825	,697	,605	,671
KDÖ72	25,50	31,411	,662	,719	,674
KDÖ74	26,45	43,092	-,119	,129	,790

<b>Reliability Statistics</b>		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,741	,743	9

**Table 25. Item-Total Statistics for Zarit's Caregiver Burden Scale Variables**

<b>Item-Total Statistics</b>					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ZBVYÖ1	50,83	112,519	,478	,574	,832
ZBVYÖ2	50,92	109,782	,679	,788	,823
ZBVYÖ3	50,93	111,016	,658	,748	,825
ZBVYÖ4	51,35	112,568	,676	,729	,826
ZBVYÖ5	51,38	113,963	,578	,761	,829
ZBVYÖ6	51,28	114,962	,560	,510	,830
ZBVYÖ7	48,70	127,055	-,046	,559	,854
ZBVYÖ8	49,94	114,312	,387	,357	,837
ZBVYÖ9	51,08	116,309	,457	,705	,834
ZBVYÖ10	51,44	111,722	,764	,751	,823
ZBVYÖ11	51,14	109,192	,769	,835	,820
ZBVYÖ12	50,99	109,274	,780	,825	,820
ZBVYÖ13	51,38	112,111	,736	,755	,824

ZBVYÖ14	49,33	119,425	,255	,401	,842
ZBVYÖ15	50,64	118,739	,195	,401	,848
ZBVYÖ16	51,51	113,642	,677	,754	,826
ZBVYÖ17	50,18	120,610	,200	,413	,845
ZBVYÖ18	51,65	117,410	,543	,620	,832
ZBVYÖ19	49,60	128,115	-,086	,490	,853
ZBVYÖ20	48,81	131,586	-,245	,684	,858
ZBVYÖ21	49,25	127,663	-,063	,250	,850
ZBVYÖ22	50,25	116,147	,366	,527	,837

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**Reliability Statistics**

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Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
,842	,851	22

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