NEAR EAST UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
APPLIED (CLINICAL) PSYCHOLOGY
POSTGRADUATE PROGRAM

MASTER THESIS

POSTTRAUMATIC GROWTH AND RELATED FACTORS AMONG POSTOPERATIVE BREAST CANCER PATIENTS

BAŞAK BAĞLAMA
20121065

THESIS SUPERVISOR
ASSIST. PROF. DR. İREM ERDEM ATAK

NICOSIA

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Prepared by; Başak BAĞLAMA

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ÖZET

Postoperatif Meme Kanseri Hastalarında Travma Sonrası Gelişim ve İlişkili Faktörler

Hazırlayan: Başak BAĞLAMA

Haziran, 2014

Meme kanseri kadınlar arasında en sık görülen kanser türüdür. Meme kanseri, kadını kadınlık, annelik ve cinsellik gibi birçok psikolojik yönden tehdit eden travmatik ve zorlayıcı bir yaşam olayıdır ve bu açıdan diğer kanser türlerine göre farklılık gösterir. Son zamanlarda, araştırmacılar tanı ve tedavi sürecinde meme kanserinin negatif sonuçlarına odaklanmak yerine, meme kanseri gibi bir travma sonucunda ortaya çıkabilecek olası olumlu sonuçlara odaklanmaya başlamışlardır. Bu noktada pozitif sonuçları araştırmak amacıyla kullanılan kavram olarak travma sonrası gelişim karşımıza çıkmaktadır. Bu çalışmanın amacı, postoperatif meme kanseri hastalarında travma sonrası gelişim ile sosyal destek, umut ve kontrol odağı arasında ilişkiyi incelemektir.

Bu çalışmaya kemoterapi, ilaç ve hormon tedavisi görmekte olan 31 postoperatif meme kanseri hastası (ortalama yaş=50.48, *SD*=11.59) dahil edilmiştir. Kadınlar, farklı şehirlerden gelerek Dr. Burhan Nalbantoğlu Devlet Hastanesi ve Yakın Doğu Üniversitesi Hastanesi'nde tedavi görmektedir. Ölçekler katılımcılara araştırmacı tarafından sözlü olarak okunarak yapılmıştır. Araştırmanın hipotezlerini test etmek amacıyla, "Sosyo-demografik Veri Formu", "Travma Sonrası Gelişim Ölçeği (TSGÖ)", "Algılanan Sosyal Destek Ölçeği"(ASDÖ), "Umut Ölçeği (UÖ)" ve "Rotter'in İç-Dış Kontrol Odağı Ölçeği (RİDKOÖ)" kullanılmıştır.

Çalışmanın sonuçlarına göre, sosyal destek ve umut ile travma sonrası gelişim arasında pozitif bir ilişki olduğu görülmüştür. Bunun yanında, travma sonrası gelişim ile kontrol odağı arasında herhangi anlamlı bir ilişki saptanmamıştır. Katılımcıların

sosyo-demografik özellikleri ve hastalıkla ilgili değişkenleri ile travma sonrası gelişim arasında anlamlı bir ilişki bulunmamıştır.

Araştırmanın sonuçları, sınırlılıkları ve gelecekteki çalışmalar için öneriler literatür ışığında sunulmuştur. Postoperatif meme kanseri hastalarında travma sonrası gelişime katkıda bulunan faktörlerin saptanması, hastaların tanı ve tedavi sonrası psikolojik sağlıklarına olumlu yönde katkıda bulunabilmek açısından oldukça önemli ve dikkate alınması gereken bir konudur.

Anahtar Kelimeler: Meme Kanseri, Travma Sonrası Gelişim, Sosyal Destek, Umut, İç-Dış Kontrol Odağı

ABSTRACT

Posttraumatic Growth and Related Factors Among Postoperative Breast Cancer Patients

Prepared by: Başak BAĞLAMA

June, 2014

Breast cancer is the most common cancer type among women. Breast cancer is a highly-challenging and traumatic situation for women which threatens some psychological aspects such as femininity, motherhood and sexuality and at this point it differs from other cancer types. Recently, rather than focusing on negative consequences of breast cancer after diagnosis and treatment, researchers focus on possible positive consequences after experiencing a trauma which refers to posttraumatic growth. The aim of the study was to assess the relationship between social support, dispositional hope, internal-external locus of control and posttraumatic growth among postoperative breast cancer patients.

The study was conducted with 31 postoperative breast cancer women (mean age=50.48, *SD*=11.59) who were undergoing postoperative chemotherapy, medication and hormonal treatment. Participants were from different cities and receiving treatment from Dr. Burhan Nalbantoğlu State Hospital and Near East University Hospital. Measurements were applied orally to the participants. "Socio-demographic Information Form", "Posttraumatic Growth Inventory (PTGI)", Multidimensional Scale of Perceived Social Support "(MSPSS)", "The Hope Scale (HS)" and "Rotter's Internal-External of Control Scale (IELCS)" were administered to the participants in order to test the hypothesis of the study.

According to the results of the study, posttraumatic growth was found to be positively related with social and dispositional hope. Besides, the results did not reveal any significant relationship between posttraumatic growth and locus of control. Based on the results, no significant relationship was found between any

sociodemographic and illness-related characteristics of the participants and posttraumatic growth.

Results, limitations, clinical implications of the study and directions for future studies were discussed in the light of the literature. Understanding the contributing factors to the development of posttraumatic growth among breast cancer patients is an important issue in the posttreatment process of breast cancer in order to improve psychological health of women with breast cancer.

Keywords: Breast Cancer, Posttraumatic Growth, Dispositional Hope, Social Support, Internal-External Locus of Control

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Başak Bağlama

Nicosia, June 2014

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ABBREVIATIONS

BC : Breast Cancer

HS : Hope Scale

IELCS : Internal-External Locus of Control Scale

MSPSS : Multi-dimensional Scale of Perceived Social Support

PTG : Posttraumatic Growth

PTGI : Posttraumatic Growth Inventory

SPSS : Statistical Package for the Social Sciences

1. INTRODUCTION

Recently, cancer is a fairly common disease worldwide. It is a chronic and life-threatening disease which has both physical and psychologial effects on the patients. Cancer is one of the most important and current health problems in the world and it is generally associated with fear, hopelessness, guiltiness, being abandoned, anxiety, pain or death. Although many preventive and medical treatment methods have been developed with the advances in technology and medicine, cancer is still perceived as a life-threatining disease which impairs many domains of life of the patients such as family relations, sexuality, work and self-care (Gümüş, 2006, 110).

Cancer is a genetic term used for a large group of complex genetic diseases which can be seen in any part of the body. The main defining feature of cancer is unregulated cell growth. Cells start to divide and grow in an uncontrollable way and produce malignant tumors which might invade to other parts of the body. In some cases when cancer is not detected and treated, cancer cells may spread through many other parts of the body. This is called metastasis and it is the major cause of death from cancer (Yao, 2004, 46).

Cancer is considered as one of the most leading causes of death worldwide. According to the statistics reported by World Health Organization, 8.2 million people died because of cancer in 2012 all throughout the world and it is expected that annual cancer cases will increase from 14 million to 22 million in the next two decades. Nevertheless, cancer is prevalent in the European Region and it is responsible for 20% of deaths accounting for 1.7 million deaths with 3 million new cases each year. In Asia, Africa and Central and South America, more than 60% new cancer cases occur during one year and these regions are responsible for 70% of the global cancer deaths (WHO, [26.04.2014]). Besides, cancer is the second most common cause of death in America after heart diseases. It was also reported that about 585,720 people in America are expected to die from cancer in 2014 and it accounts for approximately 1,600 people per day (American Cancer Society, 2014, 2). Given the high prevalence of cancer worldwide, a large amount of research exists in the literature about cancer.

There are almost over 100 different types of cancer and breast cancer is the most prevalent cancer type among women. Breast is associated with concepts of maternity and femininity among women. In most cultures, breast is perceived as a symbol of motherhood, womanhood and sexuality. In addition, breast cancer requires highly stressful medical and surgical procedures. The possibility of losing breast increases the anxiety about the disease. These situations make the treatment process more traumatic for women. Therefore, it can be indicated that breast cancer is perceived as a threat for women's feminine and maternal identity, body image, sexuality, self-confidence, self-esteem, psychological status and relationships with the environment (Lantz, Booth, 1998, 915). From this point of view, breast cancer should be taken into account differently from other cancer types occuring among women. Since it is the most prevalent cancer type among women and makes women more anxious and traumatized due to the perceptions and meanings about breast for them, there are many research in literature about the psychological consequences of breast cancer among women such as trauma and especially posttraumatic stress disorder, depression or other anxiety disorders. However, in the recent years, there is more

interest about positive psychological consequences of breast cancer in the literature. Posttraumatic growth is one of the most studied concepts among women with breast cancer after the term proposed by Tedeschi and Calhoun in the 1990s (Tedeschi, Calhoun, 1996, 460). In general terms, posttraumatic growth can be defined as positive psychological, cognitive and emotional changes after experiencing a struggle with a highly challenging life crisis (Tedeschi, Calhoun, 2004, 4). As a concept, posttraumatic growth is related with positive consequences of traumatic life events and individuals' coping processes after facing with traumatic life situations.

Accordingly, there are several factors reported in the literature such as personality characteristics like locus of control (Cummings and Swickert, 2010) dispositional hope (Ho et al., 2011, 122) and perceived social support (Bozo et al., 2009, 1009) which contribute to the development of posstraumatic growth. Locus of control was firstly proposed by Rotter and it is considered as an important aspect of personality. Locus of control basically refers to the extent in which individuals belive that they can control events that affect them (Rotter, 1966, 8). There are two dimensions of locus of control, internal and external. Individuals with higher internal locus of control believe that his/her behaviour is guided by his/her personal decisions and efforts. Individuals with higher external locus of control believes that his/her behaviour is guided by fate, luck, or any other external circumstances.

Another personality factor related with posttraumatic growth is dispositional hope. Snyder and colleagues (1991, 572) stated that hope is a positive motivational state and important personal resource which is formed by an interaction of a sense of successful agency and pathways.

The last factor which contributes to the development of posttraumatic growth is perceived social support. Cobb (1976, 310) defined social support as information which leads an individual to perceive that he/she is loved, valued, cared for and belongs to a network of communication.

As mentioned before, these three personality characteristics are found to have a contribution to the development of posttraumatic growth. The existing evidence in the literature will be demonstrated in the following parts of the introduction. In the light of the literature mentioned above, the aim of this study is to examine the role of internal and external locus of control, dispositional hope and perceived social support on the development of posttraumatic growth among postoperative breast cancer patients. Nevertheless, in the first part of the introduction, breast cancer, psychological effects of breast cancer, considering cancer as a trauma and posttraumatic growth will be described. In the following parts, dispositional hope, perceived social support, locus of control and their relationship with posttraumatic growth will be explained respectively.

1.1 Breast Cancer

Cancer is a group of diseases which leads cells in the body to change and grow uncontrollably and it can affect every part of the body. These cells which grow out of control ultimately form a lump or mass whic is called called a tumor. Cancer cells are named in which part of the body the tumor originates. In this perspective, breast cancer starts in the breast tissue. Breast cancer is commonly detected by a screening examination in which when the symptoms have not developed yet, or after the sypmtoms have developed when woman notices a lump. Breast cancer screening tools are basically mammography, magnetic resonance imaging (MRI), clinical breast examination (CBE), breast self-awareness of women, breast ultrasound and surgical biopsy. All these screening tools are used to detect the tumor, decide if the tumor is benign or cancerous, make a definitive diagnosis, determine the extent of spread of the cancer cells throughout the body, and characterize the prognosis of the disease such as staging. With these screening tools, it is expected to achieve an earlier diagnosis and improve the outcomes (American Cancer Society, 2014, 9).

There are three forms of breast cancer which can be diagnosed after screening. These are ductal carcinoma in situ (DCIS), lobular carcinoma in situ (LCIS) and other in situ breast cancers. DCIS is a condition of abnormal breast changes which begins in the cells of the breast ducts and it is non-invasive form of breast cancer. Lobular carcinoma in situ is not a true cancer form but an sign of increased risk for developing an invasive form of breast cancer. Other in situ breast cancers carry characteristics of both DCIS and LCIS or have unknown origins.

Staging is important in the process of diagnosis and treatment of breast cancer. It is a useful method which has been developed to identify the extent of cancer growth in the body. For breast cancer, staging is based on the information obtained from the screening tools (Manoharan and Pugalendhi, 2010, 2426). Pathologists describe four stages in breast cancer. Stage I is the earliest stage of invasive breast cancer. The tumor is not bigger than 2 centimetres and the cancer cells have not spread throughout the body. In stage II, the tumor is between 2 and 5 centimetres and the cancer cells might have spread to the lymph nodes under the arm. In stage I and II the duration of treatment process decrease and the possibility of recovery increases. In stage III, the tumor is more than 5 centimetres. The cancer has spread to the underarm lymph nodes or to other structures behind the breastbone. Stage IV is the latest stage of breast cancer. It is also identified as distant metastatic breast cancer. In other words, the cancer has spread to other parts of the body. Staging is very important because after the diagnosis, the treatment process is shaped based upon the stage of the breast cancer since survival is lower among women with a more advanced stage at diagnosis. The treatment methods and procedures of breast cancer will be discussed in detail in the following parts.

1.1.1 Epidemiology of Breast Cancer

Breast cancer is the most common type of cancer among women which constitutes twenty-three percent of all cancer diagnosis in women (Tahan et al., 2009, 170). According to the statistics reported by World Health Organization, 7.6 million people died in the world because of cancer in 2008 and breast cancer was the fifth common cause of cancer deaths, accounted for 458.000 of these deaths (WHO, [26.04.2014]).

Nevertheless, almost 232,670 American women are expected to be diagnosed with invasive breast cancer in 2014. Breast cancer is the second common cause of cancer deaths among women after lung cancer in the United States and and 40,000 women are estimated to die because of cancer in 2014 (Siegel et al., 2014, 18).

According to Jnr and Rahman (2012, 3), breast cancer is one of the most leading cause of deaths among females in Europe and Africa. In West Africa, there were 30000 new cases and more than 16,000 deaths in 2008. The prevalence is significantly lower in Eastern Africa with almost 18,000 new cases and 10,000 deaths in the same year. Additionally, the incidence is approximately five times higher than in Western Europe when compared to West Africa, 40,000 deaths from breast cancer were recorded in 2008 and the incidence is similar in Eastern and Central Europe with approximately 47,000 deaths in 2008. There are epidemiological differences between women in Africa and Europe. The prevalence and malignancy of breast cancer is significantly lower in Africa when compared to Europe. However, it has been emphasized that African women is more at risk to be diagnosed with breast cancer at an earlier age and the disease is more aggressive than in their European counterparts. This situation could be due to many factors such as poverty, genetic predisposition, poor health care system in Africa.

The prevalence, survival and mortality rates of breast cancer are different in developing and developed countries. In developed countries, survival rate is 73%, whereas in developing countries, this rate decreases to 53% (Parkin et al., 2005, 78). Survival from breast cancer is improving with early diagnosis and early improvement might be achieved with the optimization of screening and identification of women who are at high risk for developing breast cancer.

In addition to these statistics, breast cancer is one of the most prevalent and common cause of cancer deaths in Turkey as well (Eryılmaz et al., 2010, 146). Hadijisavvas and colleagues (2010, 4) stated that data from National Cancer Registry report an average incidence of 400 female breast cancer cases per year in Cyprus. Indeed, according to the statistics provided by Ministry of Health of Turkish Republic of Northern Cyprus (TRNC), the incidence of breast cancer is decreasing. There were 93 female breast cancer cases in 2010, 73 cases in 2011 and 51 cases in 2012 among Turkish Cypriot female population (TRNC Ministry of Health, [26.04.2014].

1.1.2. Etiology of Breast Cancer

The etiology of cancer are diverse, complex, and partially understood. Many factors are known to increase the risk of cancer, including basically genetic and environmental factors. Cancer is both caused by internal and external factors. Internal factors might include inherited mutations, hormones, immune conditions, and mutations that occur from metabolism. External factors might include tobacco use, radiation exposure, reproductive factors, age and alcohol consumption. These internal and external factors may act together and inititate or promote the development of cancer. Although what causes breast cancer is not very-well documented, the role of genetic, environmental and some hormonal factors have been frequently emphasized. Epidemiological factors have demonstrated that every

woman has risk of developing breast cancer sometime in her life. Besides, the literature has suggested several risk factors which might contribute to woman's probability of developing breast cancer (Mccready, 2004, 45). These factors include age, age at menarche and menapause, age at first pregnancy, family history, lifestyle such as diet, weight, alcohol and smoking, exogenous hormones and exposure to radiation.

American Cancer Society (2013, 9) has described individual or family related risk factors and lifestyle related risk factors for breast cancer. Women with a family history of breast cancer are at increased risk. This is also stated in Kutluk and Kars (2001, 17) in which genetic factors play an important role in the development of breast cancer. Women with a family history of breast cancer constitutes a risk group. Having first-degree relatives and mother or sister who has breast cancer increases the risk.

In addition, inherited genetic mutations are also risk factors for breast cancer. Breast cancer susceptibility genes BRCA1 and BRCA2 increase the risk for developing breast cancer. This means mutations in genetic structure and they are found to be associated with developing breast cancer. Indeed, women with a history of breast cancer are at increased risk for developing breast cancer again in her lifetime and the risk is more when the diagnosis was at a younger age. Experiencing a benign breast disease and high breast tissue density are also individual related risk factors. Age at menarche is also an important risk factor. Women who had more menstrual cycles because of starting menstruation at an early age have increased risk for breast cancer. However, younger age at pregnancy and breastfeeding for a year and more decrease the risk for developing breast cancer (American Cancer Society, 2013, 20).

Nevertheless, postmenopausal hormone use, obesity and weight gain, physical activity, diet, alcohol and tobacco use and oral contraceptive use are some of the lifestyle related risk factors indicated by the American Cancer Society (2013, 28).

Radiation, diethylstilbestrol exposure, environmental pollutants and occupational exposures such as night shift work may also be associated with increased breast cancer risk.

Furthermore, Fejerman and colleauges (2008, 9725) reported that having Greater European ancestry is found to be associated with increased risk of breast cancer. They indicated that incidence and risk for developing breast cancer is significantly higher among women of European origin in the United States of America.

In their meta-analysis work on risk factors for breast cancer, Bluming and Tavris (2012, 135) identified many risk factors which might contribute to the development of breast cancer. Dietary fiber intake, large body build at menarche, high level of stress, aspirin use, birth weight and low income are some of the risk factors reported to be associated with the development of breast cancer.

1.1.3.Treatment Methods of Breast Cancer

Radiotherapy, chemotherapy, surgical and hormonal treatments are the most commonly used treatment methods for breast cancer. In the treatment of breast cancer, many factors such as stage of cancer, type and characteristics of the tumor, age and preferences of the patient, the patient's general physical health and medical conditions which might influence the treatment and the risks and benefits related with each treatment procedure should be taken into account. Severity and prognosis of the disease should also be considered when deciding which treatment method is sutiable for the patient (İzmirli et al., 2006, 77).

1.1.3.a Surgical Treatment Methods

Some type of surgery is frequently used in the treatment of breast cancer. Surgical treatments are usually combined with other treatment procedures such as chemotherapy, radiotherapy or hormone therapy. Removing the cancer from the breast and deciding the stage of the disease are the basic aims of surgery. Surgical treatment methods include radical mastectomy and breast-conserving surgery. In breast conserving surgery, only cancerous tissue is removed from the breast. In radical mastectomy, the entire breast is removed. In the literature, it has been well documented that mastectomy has negative psychological effects on patients such as impairments in the perception of body image and femininity, depression, anxiety, fear and anger (Özkan and Alçalar, 2009, 62).

1.1.3.b Chemotherapy

Chemotherapy is the medical treatment of cancer. It is a systematic method which tries to stop reproduction and metastasis of all cancer cells throughout the body. Special drugs are used to stop the growth and reproduction of cancer cells. Chemotherapy can be taken by mouth or injected to a vein or muscle. The way that chemotherapy is given depends on the stage of breast cancer. Chemotherapy is frequently delivered as an adjuvant to decrease the possibility of recurrence of the cancer. (Manoharan and Pugalendhi, 2010, 2426).

1.1.3.c Radiotherapy

Radiotherapy is the radiation treatment which includes X-rays, gamma rays and electrons. These rays re used to damage and kill cancer cells and prevent them to grow and reproduce. There are two forms of radiotherapy. In external radiation therapy, there is a machine which is used to send radiation towards the cancer cells. In internal radiation therapy, the radioactive substances are put in the needles to target directly into or near the cancer cells. The way that radiotherapy is also given depends on the stage of breast cancer.

1.1.3.d Hormone Therapy

Hormonal treatment is mostly used with radiotherapy and chemotherapy to dispose tumors which have developed because of some special hormones. It is known that estrogen which is a hormone generated by the ovaries leads to the growth of many breast cancers. Women whose breast cancers test positive for estrogen receptors can be given hormone therapy to decrease estrogen levels or to block the effects of estrogen on the growth and reproduction of the cancer cells (American Cancer Society, 2013, 25).

1.1.3.e Targeted Therapy

Targeted therapy is a method of treatment which uses special drugs and other substances to detect and damage specific cancer cells without damaging normal cells. Trastuzumab, tyrosine and lapatinib are some examples of drugs which are used in targeted therapy to kill cancer cells. (NCI, [11.05.2014]).

1.2. Psychological Effects of Breast Cancer

According to the literature, breast cancer patients are prone to experience psychological problems. It is known that psychiatric disorders are prevalent among cancer patients (Silberfarb, 2006, 821). Furthermore, Burgess et al. (2005, 2) showed that depression and anxiety are common psychological problems among women with early breast cancer. Jansen and Muenz (1984, 38) also stated that affective disorders are prevalent among breast cancer patients. They figured out that breast cancer patients reported themselves as more depressive, having low anger levels and difficulty in expressing their emotions when compared to benign patients group and control group. Adjustment disorders and sexual disturbances (Fallowfield, Hall, 1991, 390) are other psychological problems which might occur after being diagnosed with breast cancer.

Cassem (1991, 10) proposed main problem areas for some cancer types such as prostate, lung, colon and breast. For breast cancer, changes in the body image perception due to mastectomy or breast-conserving surgery, side effects of chemotherapy such as weight gain, fatigue, difficulty in concentration and hair loss, symptoms of menapause such as insomnia and sexual dysfunction, anxiety related with sexuality and fertility and problems related with intimate partners are reported as problems that breast cancer patients might experience.

Uncertainty and fear about the future, attempts at giving meaning to disease, loss of control, emotions of inability and failure, fear of stigmatization and attempts to conceal the disease are other psychological problems which breast cancer patients might have to deal wtih (Özkan, 2007, 36).

1.2.1 Reaction to Cancer Diagnosis

1.2.1.a Kubler-Ross's Five Stages of Grief

As mentioned before, cancer as a chronic and life-threatening disease is associated with experiences of panic, conflict, anxiety, guiltiness, pain and death. In 1969, Kubler-Ross has identified five psychological stages in which how individuals react when they face with death or grief. These stages are called denial, anger, bargaining, depression and acceptance. The order and duration of the stages might change from person to person (Kubler-Ross, 1969, 80). Özkan (2007, 135) mentioned about these stages focusing on how patients diagnosed with cancer experience these stages. In the denial stage, patients experience a shock and they try to get used to this situation. Patients in the anger stage have emotions like aggression and being hurt and they question why themselves have this life-threatening disease. In the barganinig stage, patients try to come with death anxiety and bargain to live longer with supernatural powers for instance bargaining especially with God. When patients experience the depression stage, they mourn about their loss and this loss is usually death. In the acceptance stage, patients get rid of negative emotions and accept that as a fact. In this stage, patients experience emotions like peace and relief.

1.3. Cancer as a Trauma

According to the Diagnostic Statistical Manual of Mental Disorders (American Psychological Association, 1994, 428), there has to be an exposure to a traumatic life event and this is emphasized within the criteria for post-traumatic stress disorder. There are two criteria for the traumatic event which is categorized as objective part and subjective part. The objective part describes the traumatic event and the

subjective part describes the individual's response to the traumatic event. A traumatic event has to include an actual or threatened death or serious injury or a threat to physical integrity of self or others. Indeed, individual has to response to this traumatic event with a sense of intense fear, helplessnes and horror based on the definition provided in DSM-IV (Seidler and Wagner, 2006, 265).

In the literature, it has been documented that women with breast cancer are likely to experience post-traumatic stress disorder (PTSD) or PTSD-like symptoms. Accordingly, Amir and Ramati (2002, 198) stated that cancer is a chronic, life-threatening disease and patients generally react to breast cancer diagnosis with feelings of intense fear, helplessness, and a sense of horror. Nevertheless, Rubin (2001, 87) noted that women with breast cancer face severe traumas and the reality of having cancer in the body may lead to anxiety over the patient's future and her continuing life. Therefore, it is seemed that two key points, "threat to life" and "strong emotional reaction to cancer diagnosis" emerged. As mentioned before, these two points are also two required conditions for an event to be classified as traumatic event according to DSM-IV. In the light of the literature, it seems that there is a link between life-threatening illness which is in this case breast cancer, and the development of PTSD or PTSD-like symptoms. Therefore, it is essential to consider breast cancer as a traumatic event.

However, women with breast cancer diagnosis might also experience adjustment, positive psychological and life changes which are known as post-traumatic growth as well. In recent years, researchers are interested in this topic to be able to understand possible positive consequences of trauma rather than focusing on negative consequences.

1.4. Posttraumatic Growth

It is generally known that people could transform traumatic events and adversities into gaining wisdom, personal growth, positive personality changes or more meaningful and productive lives. This is in line with the aspects of positive psychology which emphasizes the potentials of human beings. Accordingly, Yalom (1999, 188) mentioned that when people face with the anxiety of death, they use denial as a defense mechanism at first. Then they start to accept death and experience personal change. After a traumatic experience, in this case death anxiety because of cancer, some people manage to reconstruct a way of life. Tedeschi and Calhoun (2004, 11) defined this situation as post-traumatic growth (PTG), which refers to the spectrum of positive changes in which an individual may experience after a traumatic event or situation. They also stated that post-traumatic growth is a positive psychological changes emerged as a result of the struggle with a higly challenging life situation. Posttraumatic growth is appeared in three main domains which are changes in "self-perception", changes in "relationship with others" and changes in "philosophy of life" (Stanton et al., 2006, 147).

There are several theories which try to explain post-traumatic growth. Among these models, Schaefer and Moos (1998, 103) conceptual model of post-traumatic growth is useful in understanding PTG.

1.4.1. Schaefer and Moos's Conceptual Model of Post-Traumatic Growth

Schaefer and Moos (1998, 103) developed a conceptual model of PTG which is important in understanding PTG among breast cancer patients. According to this model; it is suggested that environmental and personal system factors shape life crisis and their aftermath which subsequently influence appraisal and coping

responses. In addition, dynamic interaction of these factors contributes to the development of positive consequences and personal growth, in other words PTG, after a trauma. As a result of dynamic interplay among these factors, three major types of positive outcomes, which are also main components of PTG, emerge after a person experiences a life crisis. These consequences are improved social resources such as better relationships with family, improved personal resources such as assertiveness; self-understanding, and development of improved coping skills such as seeking help when needed.

Furthermore, characteristics of the life crisis are important in the development of PTG. Features of the life crisis are severity, predictability, duration, extent of loss and individual's proximity to and amount of exposure to crisis. Schaefer and Moos (1998, 105) indicated that intense personal crisis such as a life-threatening illness, might lead individuals to value life more. Therefore, it can be said that personal characteristics and resources of the patient are very important in the development of PTG.

In light of these information, locus of control and dispositional hope as personal characteristics and social support as an envrionmental resource can be thought as important predictors of PTG among breast cancer patients and in this study, these variables are examined.

1.5. Factors Affecting Posttraumatic Growth

1.5.1. Social Support

Social support is a key environmental resource which is also emphasized in Schaefer and Moos' (1998, 106) conceptual model in order to understand PTG after life traumas and transition. According to Schaefer and Moos (1998, 106), social support provides an individual to appraise and understand a life crisis in a positive way. Cobb (1976, 308) described social support as information leading an individual to belive that he or she is cared for, loved, esteemed, valued and belongs to a network of communication and mutual obligation. Cobb (1976, 308) also pointed out that social support moderates the effects of major transitions and unexpected crisis in life, therefore it leads to adaptation to change. In other words, social support buffers the relationship between an individual and stressful experience. As mentioned earlier, since breast cancer is a traumatic event, it can be assumed that social support operates a buffer of the relationship between the women with breast cancer diagnosis and their illness experience. Therefore, social support may provide women with breast cancer diagnosis to appraise their illness in a more positive way and adjust to their illness more positively. Accordingly, it can also be assumed that there is a direct relationship between social support and PTG. Bozo and colleagues (2009, 1009) showed that social support is associated with the development of PTG among postoperative breast cancer patients.

1.5.2. Dispositional Hope

Snyder and colleagues (1991, 575) defined dispositional hope as a positive motivational state which is constituted by an interaction of a sense of successful agency and pathways. Individuals with higher dispositional hope are more likely to think that they will reach their desired goals. These individuals are more likely to make sentences such as “I can do this.” and “I am not going to be stopped.”.

Dispositional hope is an important personal resource and is related with PTG and positive adjustment for women with breast cancer diagnosis. Hope may have important contributions for cancer patients in every stage of cancer prevention, detection and treatment. Therefore, it is essential to identify the role of dispositional hope for breast cancer patients. In the literature, the relationship between hope and PTG is not sufficiently emphasized. The present study aims to examine this relationship.

1.5.3 Locus of Control

Locus of control is a personality orientation which was firstly proposed by Rotter (1966, 10) and based on the theory of social learning. Rotter (1966, 10) stated that individuals have an expectation or a belief that a behavior will be followed by a reinforcement and locus of control arises when this expectation is triggered. Individuals internalize a general belief that outcomes of their behaviors are as a result of various factors which they have control over or beyond their control. People considering themselves able to control the outcomes have internal locus of control and individuals who consider their outcomes beyond of their control have external locus of control. Rotter (1966, 11) used locus of control to describe how people perceive themselves that they feel responsible from the outcomes of their actions. People with internal locus of control believe that outcomes of their actions are result

of their efforts, control or will. However, people with external locus of control believe that some external factors such as destiny, other people or environment are responsible from the outcomes.

Locus of control as a personality orientation can be related to individuals' feelings of responsibility about their illnesses. In this sense, it can be assumed that locus of control is an important factor for PTG in breast cancer patients. In the literature, it is stated that people with internal locus of control believe that they have control over their ilnesses and try to cope with the situation (Cummings and Swickert, 2010). However, people with external locus of control believe that they do not have anything to do because their illnesses and outcomes are beyond their control. Therefore, it can be expected that people with internal locus of control are more likely to develop PTG.

2. METHODOLOGY

2.1 Aim and Hypothesis of the Study

The present study aims to investigate the role of social support, locus of control and dispositional hope in the development of PTG among postoperative breast cancer patients in North Cyprus. The hypothesis of the study are:

1. Postoperative breast cancer patients with higher social support would be more likely to develop PTG.
2. Postoperative breast cancer patients with internal locus of control would be more likely to develop PTG.
3. Postoperative breast cancer patients who are high on dispositional hope would be more likely to develop PTG.

2.2. Participants

The current study was conducted with 31 postoperative breast cancer patients who are undergoing postoperative medical or hormonal treatment, chemotherapy and radiotherapy. To be eligible for participation in the current study, the criteria were being older than 18 years old, having a diagnosis of primary breast cancer within the past 5 years and at least three months should have passed after the surgery, but not more than three years should have passed after treatment. Participants were from different cities receiving treatment from the oncology departments of Near East University Hospital and Dr. Burhan Nalbantoğlu State Hospital. Socio-demographic and ilness-related characteristics of the participants are demonstrated in table 1 and table 2 in the following pages.

Table 1. Socio-demographic Characteristics of the Participants

Demographic Characteristics (N=31)		
Age Group	**n**	**%**
25-45	13	41.9
46-75	18	58.1
Level of Education		
Illiterate	1	3.2
Primary School	10	32.3
Secondry school	3	9.7
High school	11	35.5
University	5	16
Post graduate	1	3.2
Marital Status (N=31)		
Married	22	71
Seperated	5	16.1
Widowed	4	12.9
Working Situation (N=31)		
Working	7	22.6
Not working	24	77.4
Job Category		
Housewife	16	51.6
Retired	6	19.24
Self employement	8	25.8
Goverment Employee	1	3.2

Table 1. Socio-demographic Characteristics of the Participants (continued)

Having children or not (N=31)	**n**	**%**
Yes	30	96.8
No	1	3.2
Number of children		
No children	1	3.2
1 child	5	16.1
2 children	14	45.2
3 children	9	29.0
4 children	1	3.2
5 children	1	3.2
Responsible of taking caring of someone (N=31)		
Yes	1	3.2
No	30	96.8

Table 1. Socio-demographic Characteristics of the Participants (continued)

The city which the participant currently lives in (N=31)		
Nicosia	14	45.2
Kyrenia	6	19.4
Famagusta	7	22.6
İskele	4	12.9
Perception of economic situation (N=31)	**n**	**%**
Low	5	16.1
Middle	26	83.9
High	0	0

Socio-demographic characteristics of the participants can be seen in the Table 1. 31 postoperative breast cancer patients participated in the study in which 13 (41.9%) of them were at the ages between 25 and 45; and 18 (58.1%) of them were at the ages between 46 and 75. Women reported that 22 (71%) of them were married, 5 (16.1%) of them were seperated and 4 (12.9%) of them were widowed. Women also reported that 7 (22.6%) of them were working and 24 (77.4%) were not. According to the responses, 16 (51.6%) women were housewife, 6 (19.4%) were retired, 8 (25.8%) of them were self-employee and 1 (3.2%) of them was government employee. 30 (96.8%) women reported that they have children and 1 (3.2%) woman reported that she does not have a child. 5 (16.1%) women have 1 child, 14 (45.2%) women have two children, 9 women (29.0%) have three children, 1 (3.2%) woman has four children and 1 (3.2%) woman has five children. 1 (3.2%) woman was responsible of taking caring of someone and 30 (96.8%) was not responsible. In addition, 14 (45.2%) women reported that they currently live in Nicosia, 6 (19.4%) women live in Kyrenia, 7 (22.6%) women live in Famagusta and 4 (12.9%) women live in Iskele.

Table 2. Illness Related Characteristics of the Participants

Illness Related Characteristics (N=31)	**n**	**%**
Time of the diagnosis		
0-6 months	8	25.8
7-12 months	7	22.6
13-18 months	3	9.7
19-24 months	3	9.7
31-36 months	7	22.6
43-48 months	3	9.7
With whom the participant shared the diagnosis first (N=31)		
With husband	18	58.1
With children	8	25.8
With friends	2	6.5
With family	2	6.5
With husband and children	1	3.2
Age at diagnosis (N=31)		
Age at diagnosis (28-45)	13	41.9
Age at diagnosis (46-75)	18	58.1
Stage of cancer at the time of diagnosis (N=31)		
Stage 1	15	48.4
Stage 2	6	19.4
Stage 3	9	29.0
Stage 4	1	3.2
Type of Surgery (N=31)		
Breast Conserving Surgery	16	51.6
Radical Mastectomy	15	48.4

Table 2. Illness Related Characteristics of the Participants (continued)

Time of Surgery (N=31)		
0-6 months	9	29.0
7-12 months	6	19.4
13-18 months	3	9.7
19-24 months	3	9.7
31-36 months	7	22.6
43-48 months	3	9.7
Satisfaction with the Surgery (N=31)		
Yes	29	93.5
No	2	6.5
Having a posttreatment or not (N=31)		
Yes	26	83.9
No	5	16.1
Type of posttreatment (N=31)		
Chemotherapy	13	41.9
Hormone treatment	3	9.7
Medication	10	32.3
No treatment	5	16.1
Menstruation (N=31)		
In menopause	25	80.6
Still continue	6	19.4
Being informed about cancer by the doctor (N=31)		
Yes	30	96.8
No	1	3.2
Had any psychological help after the diagnosis (N=31)		
Yes	6	19.4
No	25	80.6

Table 2. Illness Related Characteristics of the Participants (continued)

Type of Psychological Treatment (N=31)		
Psychotherapy	4	12.9
Medication	1	3.2
Medication and Psychotherapy	1	3.2
No treatment	25	80.6
Sexual life affected negatively because of cancer (N=31)		
Yes	13	41.9
No	18	58.1
Hospital is far or close to the their city (N=31)		
Far	12	38.7
Close	19	61.3
Occupational life affected negatively because of cancer (N=31)		
Yes	10	32.3
No	21	67.7
Social life affected negatively because of cancer (N=31)		
Yes	13	41.9
No	18	58.1
Family relations affected negatively because of cancer (N=31)		
Yes	9	29.0
No	22	71.0

According to the participants' answers, 8 (25.8%) women diagnosed with breast cancer less than 6 months ago, 7 (22.6%) women diagnosed with BC between 7 and 12 months ago, 3 (9.7%) women diagnosed with BC between 13 and 18 months ago, 3 (9.7%) women diagnosed with BC between 19 and 24 months ago, 7 (22.6%) women diagnosed with BC between 31 and 36 months ago and 3 (9.7%) women diagnosed with BC between 43 and 48 months ago. Women also reported that 18 (58.1%) of them shared the diagnosis first with their husbands, 8 (25.8%) of them shared the diagnosis first with their children, 2 (6.5%) of them shared the diagnosis first with their friends, 2 (6.5%) shared the diagnosis first with their family and 1 (3.2%) of them shared the diagnosis first with both their husband and children. 13 (41.9%) women was diagnosed with breast cancer between the ages of 25 and 45, 18 (58.1%) women was diagnosed with breast cancer between the ages of 46 and 75. 15 (48.4%) women reported that they were diagnosed with breast cancer at the stage 1, 6 (19.4%) of them at stage 2, 9 (29.0%) of them at stage 3 and 1 (3.2%) of them at stage 4. 16 (51.6%) women had breast conserving surgery and 15 (48.4%) women had radical mastectomy. 9 (29.0%) women had an operation less than 6 months ago, 6 (19.4%) women had an operation between 7 and 12 months ago, 3 (9.7%) women had an operation between 13 and 18 months ago, 3 (9.7%) women had an operation between 19 and 24 months ago, 7 (22.6%) women had an operation between 31 and 36 months ago and 3 (9.7%) women had an operation between 43 and 48 months ago. 29 (93.5%) women reported that they are satisfied with their surgery and 2 (6.5%) women reported that they are not satisfied with their surgery. 26 (83.9%) women are having a treatment and 5 (16.1%) women are not having any treatment. According to the responses of women, 13 (41.9%) of them are having chemotherapy, 3 (9.7%) of them are having hormone treatment, 10 (32.3%) of them are having medication and 5 (16.1%) of them are having no treatment. Women reported that 25 (80.6%) of them are in menopause and 6 (19.4%) of them stil menstruates. 30 (96.8%) women reported that they were informed about breast cancer in detail by

their doctors and 1 (3.2%) woman reported that she was not informed about breast cancer in detail by her doctor.

6 (19.4%) women reported that they had psychological help after diagnosis and 25 (80.6%) women reported that they did not need any psychological help after diagnosis. 4 (12.9%) reported that they had psychotherapy, 1 (3.2%) woman had medication and 1 (3.2%) woman had both medication and psychotherapy. 13 (41.9%) women reported that their sexual life was affected negatively because of cancer and 18 (58.1%) women reported that their sexual life was not affected negatively because of cancer. In addition, 12 (38.7%) women reported that the hospital which they are having treatment are far from their cities and 19 (61.3%) of them reported that it is close to them. 10 (32.3%) women reported that their occupational life was negatively affected because of cancer and 21 (67.7%) women reported that their occupational life was not negatively affected because of cancer. 13 (41.9%) women reported that their social life was negatively affected because of cancer and 18 (58.1%) women reported that their social life was negatively affected because of cancer. Lastly, 9 (29.0%) women reported that their family relations was negatively affected because of cancer and 22 (71.0%) women reported that their family relations was not negatively affected because of cancer.

2.3. Procedure

Firstly, an application was made to the ethics committee of Near East University and necessary ethical approvals obtained in order to conduct the study. Additionally, to be able to collect data, necessary approvals have been obtained from the Ministry of Health and from the chef physician of the Near East University Hospital. The data collected from 31 postoperative breast cancer patients from the Near East University Hospital and Dr. Burhan Nalbantoğlu State Hospital. The administration of the questionnaires took approximately 30 minutes. Since, the participants were

undergoning treatment at the hospitals and they could not use their hands freely, the questionnaires were mostly administered by the researcher with the patients. Participation to the study was voluntary and an informed consent form was given to the participants before the study in order to inform them about the aims of the study and participation to the study is voluntary and they can quit from the study whenever they want. After the application of the study, a debriefing form was given to the participants with the contact information of the researcher in order to tell them that if they have any questions regarding the study, they can feel free to ask to the researcher whenever they would like to.

2.4 Instruments

In the current study, a socio-demographic information form was prepared by the researcher and included questions related with the demographic characteristics of the participants and variables related with the illness. In addition, "Posttraumatic Growth Inventory", "The Hope Scale", "Multi-dimensional Scale of Perceived Social Support" and "Rotter's Internal-External Locus of Control Scale" were used to collect data from the patients.

2.4.1. Socio-Demographic Information Form

Socio-demographic information form is consisted of questions about socio-demographic characteristics of the participants and their illnesses. Questions are on the age, education level, marital status, income level, hometown, work status, number of children. The questions regarding the illness are about the time of diagnosis, the stage of breast cancer at the time of diagnosis, type of the posttreatment (chemotherapy, radiotherapy and hormonal therapy), if they have

informed about the illness by their doctors or not, if breast cancer affected their sexual lives, family relationhips and occupational lives negatively or not.

2.4.2 Postttraumatic Growth Inventory (PTGI)

The PTGI was developed by Tedeschi and Calhoun (1996, 460), translated into Turkish by Kılıç (2005, 3) and then revised and adapted by Dirik and Karancı (2008, 196). The PTGI assess positive changes perceived as a result of coping with trauma or illness and consisted of 21 items and has 5 subscales that are new possibilities, relating to others, personal strength, spiritual change, and appreciation of life. Each item was rated on a 6-point scale ranging from 0 (*I did not experience this change as a result of my crisis)* to 5 *(I experienced this change to a very great degree*). According to Dirik and Karancı (2008), factor analysis of PTGI demonstrated 3 factors which were labeled as changes in 'relationship with others' (Cronbach's Alpha = .86), 'philosophy of life' (Cronbach's Alpha = .87) and 'self-perception' (Cronbach's Alpha = .88) in Turkish sample. Tedeschi and Calhoun (1996) stated that the internal consistency coefficient of the scale was .90 and the test-retest reliability with 2-month interval was .71.

2.4.3 Multidimensional Scale of Perceived Social Support (MSPSS)

The MSPSS was first developed by Zimet, Dahlem, Zimet, and Farley (1988, 32). It is a 7-point Likert-type scale consisting of 12 items questioning the source and the level of social support provided by a significant other, family, and friends. Higher scores on this scale demonstrate higher levels of perceived social support. The reliability of the Turkish version was assessed by Cronbach's alpha and it was found to be between .80 and .95 (Eker, Akar, Yaldız, 2001, 21).

2.4.4 The Hope Scale

The Hope Scale, developed by Snyder and Harris (1991, 577), is a 4-point Likert type scale consisting of 12 items. Turkish version of the Hope Scale was translated and adapted to Turkish (Akman, Korkut, 1993, 196).

The Hope Scale consists of two dimensions, which are agency and pathway. Snyder and Harris (1991, 578) demonstrated that the internal consistency reliability coefficient of the scale as between .70 and .80, and the test-retest reliability with 10-week interval as .76. The internal consistency reliability coefficient of the Turkish version was .65 and the test-retest reliability coefficient with a 4-week interval was .66.

2.4.5 Rotter's Internal-External Locus of Control Scale (IELCS)

The Internal-External Locus of Control Scale (IELCS) was developed by Rotter in 1966. It consists of 29 items that measure locus of control on an internal-external continuum. Each item is presented with two statements indicating internal and external beliefs and participants are asked to choose one of these statements that they believe to be true. Six out of 29 items are filler items which are not scored. Higher scores in IELCS indicate high external locus of control and lower scores indicate higher internal locus of control. IELCS was adapted to Turkish by Dağ (1991, 13) in a sample of university students and the reliability and validity of the scale is high.

2.5 Data Analysis

All collected data for this current research were analyzed by using 20th version of the Statistical Package for the Social Sciences (SPSS). In order to test the hypothesis of the current study data were analyzed by using, t-test analysis, One-way ANOVA and Pearson correlation. Findings were interpreted as statistically significant at $p \leq 0.05$ level.

3. RESULTS

Table 3. Descriptive statistics of the total scores from the PTGI, MSPSS, HS and IELCS scales

	n	Mean	SD	Min.	Max.
PTGI	31	80.71	19.86	29	105
MSPSS	31	77.74	6.72	65	84
HS	31	40.35	4.52	32	48
IELCS	31	5.29	2.13	2	9

In Table 3, the descriptive statistics of PTGI, MSPSS, HS and IELCS scales are demonstrated.

Table 4. Descriptive statistics of the scores from subscales of PTGI

	N	Mean	SD	Min.	Max.
Change in the self-perception	31	24.94	9.17	17	45
Change in the philosophy of life	31	17.32	5.73	5	25
Change in the relationship with others	31	38.45	7.76	2	35

In Table 4, the descriptive statistics of PTGI subscales; "change in the self-perception", "change in the philosophy of life" and "change in the relationship with others" are provided.

Table 5. Relation of Social Support (MSPSS) and Posttraumatic Growth (PTGI) total mean score

	Social Support
Posttraumatic Growth	r = 0.47 p= 0.007*

* $p \leq 0.05$

Significant relationship was found between social support and posttraumatic growth when the mean scores of MSPSS and PTGI were compared by correlational analysis.

Table 6. Relation of Dispositional Hope (HS) and Posttraumatic Growth (PTGI) total mean score

	Dispositional Hope
Posttraumatic Growth	r = 0.47 p= 0.008*

* $p \leq 0.05$

Significant relationship was found between dispositional hope and posttraumatic growth when the mean scores of HS and PTGI were compared by correlational analysis.

Table 7. Relation of Locus of Control (IELCS) and Posttraumatic Growth (PTGI) total mean score

	Locus of Control
Posttraumatic Growth	r = 0.22 p= 0.241

* $p \leq 0.05$

There was no significant correlation between locus of control and posttraumatic growth.

Table 8. Relation of PTGI Subscales and MSPSS

PTGI Subscales	**Social Support**
Relationship with others	r = 0.52* p= 0.002
Philosophy of life	r = 0.15 p= 0.431
Self-perception	r = 0.48* p= 0.006

* $p \leq 0.05$

Based on the results, there was significant correlation between the PTGI subscales of "change in relationship with others" and "change in self-perception" and social support. However, no relationship was found between the PTGI subscale of "change in philosophy of life" and social support.

Table 9. Relation of PTGI Subscales and Dispositional Hope (HS)

PTGI Subscales	Dispositional Hope
Relationship with others	r = 0.55* p= 0.001
Philosophy of life	r = 0.14 p= 0.446
Self-perception	r = 0.44* p= 0.013

* $p \leq 0.05$

Based on the results, there was significant correlation between the PTGI subscales of "change in relationship with others" and "change in self-perception" and dispositional hope. However, no relationship was found between the PTGI subscale of "change in philosophy of life" and dispositional hope.

Table 10. Relation of PTGI Subscales and Locus of Control

PTGI Subscales	Locus of Control
Relationship with others	r = -0.04 p= 0.838
Philosophy of life	r = -0.002 p= 0.990
Self-perception	r = -0.063 p= 0.738

* $p \leq 0.05$

According to the analysis, no significant relationship was found between the PTGI subscales and locus of control.

Table 11. T-test results of PTGI mean scores and age

Age	**m ± sd**	**t(p)**
Age(28-45)	40.08 ± 4.82	-0.286
Age(46-75)	40.56 ± 4.42	(0.427)

No statistically significant difference was found between participants' scores on PTGI and age.

Table 12. One-way ANOVA results of PTGI mean scores and level of education

Level of Education	**m ± sd**	**f(p)**
Not illiterate	39.00 ± 00.00	
Primary School	43.10 ± 4.46	
Secondary School	38.00 ± 2.65	1.989
Highschool	38.90 ± 4.81	(0.115)
University	41.20 ± 1.92	
Postgraduate	33.00 ± 00.00	

No statistically significant difference was found between participants' scores on PTGI and education level.

Table 13. One-way ANOVA results of PTGI mean scores and marital status

Marital status	**m ± sd**	**f(p)**
Single	95.00 ± 00.00	
Married	92.10 ± 13.80	3.680
Seperated	59.67 ± 27.47	(0.067)
Widowed	69.00 ± 19.96	

No statistically significant difference was found between participants' scores on PTGI and marital status. In other words, the mean scores of PTGI did not differ based on the marital status of the participants.

Table 14. T-test results of PTGI mean scores and working status

Working Status	**m ± sd**	**t(p)**
Working	79.14 ± 24.78	-0.233
Not working	81.17 ± 18.79	(0.817)

No statistically significant difference was found between participants' scores on PTGI and working status.

Table 15. One-way ANOVA results of PTGI mean scores and job category

Job category	**m ± sd**	f(p)
House wife	81.63 ± 22.05	0.232 (0.873)
Retired	82.50 ± 11.27	
Self-employment	76.25 ± 22.68	
Government employee	91.00 ± 00.00	

No statistically significant difference was found between participants' scores on PTGI and job category. In other words, the mean scores of PTGI did not differ based on the job category of the participants.

Table 16. T-test results of PTGI mean scores and having children or not having children

Having children or not	**m ± sd**	**t(p)**
Yes	82.30 ± 18.07	2.683
No	33.00 ± 00.00	(0.072)

No statistically significant difference was found between participants' scores on PTGI and having children or not having children.

Table 17. One-way ANOVA results of PTGI mean scores and number of children

Number of children	m ± sd	f(p)
No children	33.00 ± 00.00	1.375 (0.267)
1 Child	84.00 ± 6.20	
2 Children	81.57 ± 24.10	
3 Children	81.00 ± 10.95	
4 Children	95.00 ± 00.00	
5 Children	83.00 ± 00.00	

No statistically significant difference was found between participants' scores on PTGI and number of children.

Table 18. T-test results of PTGI mean scores and being responsible of taking care of someone

Taking care of someone of not	m ± sd	t(p)
Yes	81.00 ± 00.00	0.075 (0.988)
No	80.70 ± 20.19	

No statistically significant difference was found between participants' scores on PTGI and being responsible of taking care of someone or not.

Table 19. One-way ANOVA results of PTGI mean scores and the city which the participants currently live in

City	m ± sd	f(p)
Nicosia	76.85 ± 19.45	2.097 (0.124)
Kyrenia	97.67 ± 13.65	
Famagusta	74.14 ± 24.08	
İskele	80.25± 9.43	
Güzelyurt	80.71 ± 19.86	

No statistically significant difference was found between participants' scores on PTGI and the city which the respondent currently live in.

Table 20. One-way ANOVA results of PTGI mean scores and perception of economic situation

Perception of economic situation	m ± sd	f(p)
Low	69.80 ± 27.54	2.232 (0.146)
Middle	83.00 ± 17.83	
High	80.71 ± 19.86	

No statistically significant difference was found between participants' scores on PTGI and perception of economic situation.

Table 21. One-way ANOVA results of PTGI mean scores and the time when the participants are diagnosed with breast cancer

Time of diagnosis	m ± sd	f(p)
0-6 months ago	80.63 ± 21.48	0.899 (0.497)
7-12 months ago	82.71 ± 13.43	
13-18 months ago	92.33 ± 19.39	
19-24 months ago	81.67 ± 21.00	
31-36 months ago	68.71 ± 23.46	
43-48 months ago	91.67 ± 19.73	

No statistically significant difference was found between participants' scores on PTGI and time of diagnosis.

Table 22. One-way ANOVA results of PTGI mean scores and with whom the participants shared the diagnosis first

With whom the pariticant shared	m ± sd	f(p)
With husband	87.56 ± 13.14	4.669 0.567
With children	68.63 ± 21.81	
With friends	103.00 ± 2.83	
With family	50.50 ± 24.75	
With husband and children	70.00 ± 00.00	

No statistically significant difference was found between participants' scores on PTGI and with whom the participants shared the diagnosis first.

Table 23. T-test results of PTGI mean scores and the age at the time of diagnosis

Age at the time of diagnosis	m ± sd	t(p)
Age at diagnosis (28-45)	82.23 ± 17.96	0.357 (0.814)
Age at diagnosis (46-75)	79.61 ± 21.57	

No statistically significant difference was found between participants' scores on PTGI and the age at the time of diagnosis.

Table 24. One-way ANOVA results of PTGI mean scores and stage of breast cancer at the time of diagnosis

Stage of cancer	m ± sd	f(p)
First Stage	77.14 ± 22.94	0.957 (0.427)
Second Stage	76.84 ± 9.85	
Third Stage	90.11 ± 18.84	
Fourth Stage	73.00 ± 00.00	

No statistically significant difference was found between participants' scores on PTGI and the stage of cancer at the time of diagnosis.

Table 25. T-test results of PTGI mean scores and type of surgery

Type of surgery	**m ± sd**	**t(p)**
Breast Conserving Surgery	74.20 ± 23.54	1.836 (0.077)
Radical Mastectomy	86.81 ± 13.76	

No statistically significant difference was found between participants' scores on PTGI and the type of surgerys.

Table 26. One-way ANOVA results of PTGI mean scores and time of the surgery

Time of surgery	**m ± sd**	**F(p)**
0-6 months ago	82.22 ± 20.66	0.895 (0.500)
7-12 months ago	80.67 ± 13.46	
13-18 months ago	92.34 ± 19.39	
19-24 months ago	81.67 ± 21.00	
31-36 months ago	68.71 ± 23.46	
43-48 months ago	91.67 ± 19.73	

No statistically significant difference was found between participants' scores on PTGI and the time of surgeries.

Table 27. T-test results of PTGI mean scores and satisfaction with the surgery

Satisfaction with the surgery	**m ± sd**	**t(p)**
Satisfied	82.97 ± 18.02	2.637 (0.713)
Not Satisfied	48.00 ± 21.21	

No statistically significant difference was found between participants' scores on PTGI and the time of surgeries.

Table 28. T-test results of PTGI mean scores and having posttreatment or not having treatment

Having treatment or not	m ± sd	t(p)
Yes	80.62 ± 19.36	-0.069
No	81.20 ± 24.78	(-0.750

No statistically significant difference was found between participants' scores on PTGI and having a treatment or not.

Table 29. One-way ANOVA results of PTGI mean scores and type of posttreatment

Type of posttreatment	m ± sd	f(p)
Chemotherapy	80.85 ± 18.79	2.513 0.080
Hormone Therapy	54.67 ± 19.29	
Medication Treatment	88.10 ± 14.20	
No treatment	81.20 ± 19.85	

No statistically significant difference was found between participants' scores on PTGI and the type of posttreatment.

Table 30. T-test results of PTGI mean scores and menstruation situation

menstruation situation	m ± sd	t(p)
In menopause	80.44 ± 19.95	-0.152
Still continues	81.84 ± 21.27	(0.880)

No statistically significant difference was found between participants' scores on PTGI and the menstruation situation.

Table 31. T-test results of PTGI mean scores and being informed about breast cancer by the doctor

Being informed	m ± sd	t(p)
Yes	80.50 ± 20.16	-0.317
No	87.00 ± 00.00	(0.753)

No statistically significant difference was found between participants' scores on PTGI and being informed about breast cancer by the doctor.

Table 32. T-test results of PTGI mean scores and having a psychological treatment after the diagnosis

Having a psychological treatment	m ± sd	t(p)
Yes	91.17 ± 15.17	1.463
No	78.20 ± 20.28	(0.154)

No statistically significant difference was found between participants' scores on PTGI and having a psychological treatment after the diagnosis.

Table 33. One-way ANOVA results of PTGI mean scores and which type of psychological treatment did the participants had

Type of psychological treatment	m ± sd	f(p)
Medication Treatment	101.00 ± 00.00	0.957 0.427
Psychotherapy	86.00 ± 16.63	
Medication Treatment and Psychotherapy	102.00 ± 00.00	
No treatment	78.20 ± 20.28	

No statistically significant difference was found between participants' scores on PTGI and the type of psychological treatment.

Table 34. T-test results of PTGI mean scores and if breast cancer affected their sexual lifes negatively or not

Sexual life negatively affected	m ± sd	t(p)
Yes	78.85 ± 21.95	-0.438
No	82.06 ± 18.74	(0.665)

No statistically significant difference was found between participants' scores on PTGI and if breast cancer affected their sexual lifes negatively or not.

Table 35. T-test results of PTGI mean scores and if the hospital is far or close to their current city

Far or close	m ± sd	t(p)
Far	80.42 ± 20.79	-0.064
Close	80.89 ± 19.83	(0.949)

No statistically significant difference was found between participants' scores on PTGI and if the hospital is far or close to their current city.

Table 36. T-test results of PTGI mean scores and if cancer affected their occupational life negatively or not

Occupational life affected negatively or not	m ± sd	t(p)
Yes	75.20 ± 23.50	-1.069
No	83.34 ± 17.90	(0.294)

No statistically significant difference was found between participants' scores on PTGI and if cancer affected their occupational life negatively or not.

Table 37. T-test results of PTGI mean scores and if cancer affected their social life negatively or not

Social life affected negatively or not	m ± sd	t(p)
Yes	73.08 ± 19.70	-1.896
No	86.22 ± 18.57	(0.068)

No statistically significant difference was found between participants' scores on PTGI and if cancer affected their social life negatively or not.

Table 38. T-test results of PTGI mean scores and if cancer affected their family relationships negatively or not

Family relationships affected negatively or not	**m ± sd**	**t(p)**
Yes	74.44 ± 23.72	-1.129 (0.268)
No	83.27 ± 18.03	

No statistically significant difference was found between participants' scores on PTGI and if cancer affected their family relationships negatively or not.

4. DISCUSSION

Breast cancer is a chronic, life-threatening disease and breast cancer patients might adapt to this highly challenging and stressful situation either in a positive or negative way. After the treatment process, they can sometimes adapt to this situation positively. In the current study, some variables which might be related with posttraumatic growth were examined. The purpose of the present study was to examine PTG among postoperative breast cancer patients. Additionally, the relationship between social support, dispositional hope, locus of control and posttraumatic growth was analyzed. For these purposes, PTG was measured by the PTGI, and questions related with the demographic chracateristics of the participants and some illness related questions were asked to the participants. Moreover, in order to assess the relationships between the variables of the study and posttraumatic growth, scales which are standardized, translated adapted into Turkish were administered to the participants. In the light of the literature, social support, dispositional hope and locus of control and their relationships with their posttraumatic growth were investigated. This section presents a summary of the results, and discusses the findings of the study. The results of the current study will be discussed. Additionally, the relationship between some demographic and ilness related characteristics of the participants and study variables will be discussed. Secondly, limitations of the study, clinical implications and resommendations for further research will also be presented.

According to the results, the hypothesis of the study were confirmed except one of them. Firstly, the assumption that postoperative breast cancer patients with higher social support would be more likely to develop higher posttraumatic growth was confirmed. This finding is also consistent with the results of the studies in the literature. In their meta-analysis study, Prati and Pietrantoni (2009, 371) figured out that social support and seeking social support coping were moderately related with

PTG among postoperative breast cancer. They emphasized that social support is an important contributor for the development of PTG. Bozo, Gündoğdu and Büyükaşık-Çolak (2009, 1009) also showed that breast cancer survivors high on social support are more likely to develop PTG. In the current study, social support was investigated as being an important contributor to PTG. In the two studies mentioned above, the researchers focues on the moderative effect of the social support on PTG. Examining social support as a moderative factor might improve the results of the study and provide the oppurtinity to suggest a model for the relationship between social support and PTG. Future studies may take into account this situation by trying to suggest a model by adding some other variables which is considered to be associated with the development of PTG.

As a conservative society, having social support from the environment is really valued among Turkish Cypriots. Having social relationships, social cohesion and social integration have been claimed to be related with the health of people who live in that society. House, Umberson and Landis (1988, 300) identified three social processes; social support, relational demands and social regulation or control which provides social integration in societies and this is positively associated with human health and well-being. Therefore, it can be said that since Turkish Cypriot community is a conservative society as a Mediterranean country, social support is an important phenomenon and this might have been related with high social support among the participants and accordingly higher PTG which was hypothesized.

In the present study, dispositional hope is another variable which was assumed to be contribute the development of PTG among postoperative breast cancer patients. This hypothesis was confirmed based on the results. Dispositional hope was found to have a relationship between PTG. There are some studies which have demonstrated similar results with the present study showing that higher levels of hope might lead to PTG and positive consequences. According to Stanton and colleagues (2002, 98),

breast cancer patients who were high in hope have greater adaptational benefits when struggling with breast cancer. They also stated that high-hope cancer patients tend to have higher positive outcome expectancies about treatment and recovery from breast cancer. Therefore, it can be said that hope is an important contributor for the development of PTG among breast cancer patients and this corresponds with the results of the current study.

However, the hypothesis assuming that breast cancer patients with internal locus of control would be more likely to develop PTG was not confirmed. No correlation has been found between locus of control and PTG. This result is inconsistent with the findings of previous studies in the literature. This might be due to the results of the Rotter's Internal-External Locus of Control Scale which was administrated to the participants in order to assess whether the patients have internal or external locus of control. According to the results of this scale, the scores on the locus of control scale revealed that participants tend to have external locus of control rather than internal locus of control. Since patients have external locus of control based on the results, the hypothesis could not be confirmed. In addition, there was no correlation between having external locus of control and developing PTG as well.

The relationship between some demographic characteristics of the participants such as education level, marital status, perception of income level, working status, having children and the variables of the study were analyzed. Also illness related chracteristics such as stage of cancer, time since diagnosis, having or not having a posttreatment, if cancer has affected some domains of their lives negatively were also analyzed to detect if there are relationships between them and PTG. However, no demographic characteristics and no illness related characteristics have been found to be related with PTG. In other words, the results did not reveal any statistically significant differences in terms of suggesting a relationship between PTG and any demographic or illness related characteristics. This finding is inconsistent with the

literature suggesting that there are some demograpic and illness related characteristics which have been found to be associated with PTG among breast cancer survivors. For instance, according to Cordova and colleagues (2001, 983), higher income is positively associated with PTG among breast cancer patients. Nevertheless, Tomich and Helgeson (2004, 21) indicated that women diagnosed with more severe breast cancer perceived more benefits from cancer experience following diagnosis than women diagnosed with less severe breast cancer. In other words, stage of breast cancer is an important factor in the development of PTG among breast cancer patients. However, in the current study, no relationship has been found between the stage of breast cancer and PTG.

As it can be seen from the results, participants generally reported higher PTG regardless of some their demographic and illness related variables. This can be interpreted as a situation in which although breast cancer is a really challenging and traumatic life event, people have the ability to develop posttraumatic growth regardless of their demographic and illness related characteristics. Based on the definition of PTG, it is assumed that after experiencing a traumatic or highly challenging life event, people can show positive symptoms such as adaptation to life, changing their philosophy of life and have more quality of life. Morrill and colleagues (2007, 952) indicated that PTG had a positive relationship with posttraumatic stres symptoms among breast cancer patients. Moreover, breast cancer patients who perceived cancer as a traumatic stressor experienced both stres response symptoms and perception of positive changes (Cordova et al., 2007, 311). There is a possible explanation for these findings. Since breast cancer is a trauma, it involves actual or threatened death and had a threat to physical integrity. Accordingly, breast cancer patients feel fear, helplessness and horror due to cancer. In addition, all types of trumas and therefore in this case breast cancer appear suddenly and disrupt individual's prior beliefs, thoughts, evaluations about life and others. Therefore, while breast cancer patients experiences these negative consequences of breast cancer, they might also try to find benefit from this highly challenging experience,

restructure their beliefs, thoughts, and appraisals about life and change their life priorities. As a result, participants show higher posttraumatic growth regardless of their some demographic and illness related characteristics. Similar results have been found when the relationship between the sub-scales of PTGI and the variables of the study or socio-demographic characteristics. Hope and social support have been found to be related with two dimensions of PTG, relationship with others and self-perception. However, no relationship has been detected between the sub-scales of PTGI and locus of control. This finding is inconsistent with the findings of Bayraktar (2008, 15). In the study of Bayraktar (2008, 15), external locus of control was found to be related with the subscales of "change in the philosophy of life", "change in the self-perception" and "change in the relationship with others". It was found that when the scores on locus of control is increase, which refers to external locus of control, the scores on the subscales of "change in the philosophy of life", "change in the self-perception" and "change in the relationship with others" decreased.

One of the limitations of the current study is about the way of collecting data. The answers were collected from participants orally. Therefore, participants may have given socially desirable answers and this might possibly have affected the results of the study. The patients experiencing such a trauma and a highly challinging process may avoided from expressing themselves and this might had an effect on the results of the study. Another limitation of the study is insufficient sample size. Thus, there were not so much diversity among the participants. The sample size was insufficient among groups of having children, education level, marital status, perception of income level, stage of breast cancer, work status. Therefore, the comparison of group variables was not possible. A possible explanation of the small sample size might be the increase in the awareness and consciousness about the cancer and the negative consequences of it. Elmore and colleagues (2005, 1250) suggested that more than majority of women older than 40 years in the United States use breast cancer screening tools especially mammography. Women has began to use screening tools such as mammography or breast ultrasound or self-breast examination in order to be

able to increase the oppurtunitiy of earlier detection of breast cancer. Accordingly, annual or regular controls by the screening tools of breast cancer might have been increased due to the increase in the awareness. Future research should utilize larger sample sizes in order to have more generalizable results among the postoperative Turkish Cypriot breast cancer women.

The sample was only consisted of breast cancer patients. This might be another limitation of present the study. Including participants with other cancer types might have yielded different results and there would be the oppurtinity to make comparisons among groups with different cancer types. In addition, participants diagnosed with breast cancer and had an operation in the time range of within one month and five years. This broad time range of time since diagnosis and post-treatment might have affected the results of the study. Having diagnosed with breast cancer for a long time might change the perceptions about the disease and this might result in different PTG scores.

Since there is not any previous study examining the relationship between PTG and some variables among the Turkish Cypriot postoperative breast cancer patients, the present study could be considered as a pilot study for other research in this area. Focusing on the possible positive consequences of trauma could provide many benefits to professionals who work with cancer patients in clinical settings in terms of contributing to the adaptation process after diagnosis and posttreatment. In this sense, the results of the present study might contribute to the discipline which handles healths and diseases from a biopsychological perspective which is called consultation-liasion psychiatry. Consultation-liasion psychiatry tries to integrate medicine and psychiatry and claims that psychological interventions are really important in the treatment of the chronic diseases (Özkan, 2007, 140). The present study showed that breast cancer patients develop PTG and therefore, this study should be considered as a contribution to the area of consultation-liasion psychiatry.

5. CONCLUSION

In this study, the results showed that women with breast cancer experience posttraumatic growth after having operation. The study has three hypothesis and based on the results, two of them confirmed but one of them was not confirmed. According to the results, social support and dispositional hope play an important role in the development of PTG. Women with high social support and high hope experience higher levels of posttraumatic growth. However, locus of control which is the third independent variable of the study was not found to be related with experiencing PTG after operation. Due to several reasons, the sample size of the study was small and this might lead to problems about the generalizability of the results. 31 women who had diagnosed with breast cancer and had an operation participated to the study. After having permission from Dr. Burhan Nalbantoğlu State Hospital and Near East University Hospital, the study was conducted in the oncology departments of these hospitals. However, only 31 participants could be included to the study. North Cyprus is a country with a small population and this can be an important factor for the small sample size of the study. Future studies should include larger sample sizes in order to improve the statistical power and therefore more generalizability of the results.

In conclusion, the study tried to demonstrate that although breast cancer is a traumatic and highly challenging situation, women can experience posttraumatic growth. At this point, it is important to undestand and detect the factors which contribute to the development of PTG among women in order to contribute to the posttreatment process by increasing the possible positive outcomes of breast cancer. Therefore, it can be said that this study might lead to future studies which will be conducted among postoperative breast cancer patients in the North Cyprus community.

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APPENDICES

Appendix.1. Informed Consent Form / Aydınlatılmış Onam Formu

Bu çalışma, Yakın Doğu Üniversitesi Klinik Psikoloji Yüksek Lisans Programı öğrencisi Başak Bağlama tarafından, Yrd. Doç. Dr. İrem Erdem Atak'ın danışmanlığında meme kanseri olan kadınlarla yürütülen bir tez çalışmasıdır. Çalışmanın amacı, meme kanseri tanısı alan kişilerde bazı psikolojik faktörlerin incelenmesidir. Çalışmaya katılım tamamıyla gönüllülük esasına dayanmaktadır. Ankette, sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplarınız tamamen gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Bireysel hiçbir değerlendirme yapılmayacaktır ve elde edilen bilgiler sadece bilimsel yayınlarda kullanılacaktır. Anket, genel olarak kişisel rahatsızlık verecek soruları içermemektedir ve anketi cevaplamanız yaklaşık 30 dakikanızı alacaktır. Katılım sırasında sorulardan ya da başka bir nedenden ötürü kendinizi rahatsız hissederseniz cevaplama işini yarıda bırakmakta serbestsiniz. Anket sonunda, bu çalışmayla ilgili sorularınız cevaplanacaktır. Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz.

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda kesip çıkabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum. (Formu doldurup imzaladıktan sonra uygulayıcıya geri veriniz).

İsim:

İmza:

Tarih:

Appendix.2. Debriefing Form/Katılım Sonrası Bilgilendirme Formu

Bu çalışma daha önce de belirtildiği gibi Yakın Doğu Üniversitesi Klinik Psikoloji Yüksek Lisans Öğrencisi Başak Bağlama tarafından Yrd. Doç. Dr. İrem Erdem Atak danışmanlığında yürütülen bir tez çalışmasıdır. Bu çalışmanın Haziran 2014 sonunda sonuçlanması beklenmektedir. Elde edilen bilgiler sadece bilimsel araştırma ve yazılarda kullanılacaktır. Çalışmanın sonuçlarını öğrenmek yada bu araştırma hakkında daha fazla bilgi almak için aşağıdaki iletişim bilgilerinden araştırmacıya ulaşabilmeniz mümkündür. Bu araştırmaya katkıda bulunduğunuz için tekrar çok teşekkür ederiz.

Başak Bağlama,

Psikolog,

Klinik Psikolojisi Yüksek Lisans Programı Öğrencisi,

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E-posta: basakbaglama@yahoo.com

Appendix.3. Socio-Demographic Information Form/Sosyo-Demografik Bilgi Formu

1. Yaşınız: _____

2. Eğitim düzeyiniz:

a)Okur-yazar değil b)Okuryazar c)İlkokul d)Ortaokul e)Lise

f)Yüksek okul g)Üniversite h)Üniversite üstü

3. Medeni haliniz:

a)Bekar b)Evli c)Boşanmış d)Dul

4. Çalışıyor musunuz?: ____ Evet ___ Hayır

Evet ise mesleğiniz: _____

5. Çocuğunuz var mı?: _____Evet _____Hayır

Evet ise kaç tane? ____

Bakmakla yükümlü olduğunuz başka biri var mı?

_____Evet _____Hayır

6. Nerede yaşıyorsunuz? _____

7. Ekonomik durumunuzu en iyi hangi seçenek yansıtıyor?

a)Düşük

b)Orta

c)Yüksek

8. Ne kadar süre önce hasta olduğunuzu öğrendiniz? _____

9. Tanıyı ilk olarak kiminle paylaştınız? _____

10. Tanıyı aldığınız zaman kaç yaşındaydınız? _____

11. Tanı aldığınızda hastalığınızın kaçıncı evresindeydiniz?

a)Birinci evre b)İkinci evre

c)Üçüncü evre d)Dördüncü evre

12. Geçirdiğiniz ameliyat tipi nedir?

a)Radikal Mastektomi b) Meme Koruyucu Cerrahi

13. Ne kadar süre önce ameliyat geçirdiniz? _____

14. Şu anda herhangi bir tedavi görüyor musunuz? _____ Evet _____ Hayır

Evet ise hangisi?

Kemoterapi _____

Radyoterapi _____

Hormon tedavisi _____

Diğer _____

15. Menstürasyon (Adet Kanaması) durumu nedir?

a) Menapozda b) Halen sürüyor

16. Hastalığınız hakkında doktorunuz tarafından bilgilendirildiniz mi?

Evet _____ Hayır _____

17. Hastalığınızın tedavi sürecinde herhangi bir psikiyatrik/psikolojik yardım aldınız mı ?

Evet _____ Hayır _____

Evet ise ne tür bir tedavi?

a) İlaç tedavisi b)Psikoterapi c)İlaç ve Psikoterapi

18. Hastalığınız cinsel yaşamınızı olumsuz yönde etkiledi mi?

Evet _____ Hayır _____

19. Tedavi gördüğünüz/görmekte olduğunuz yer yaşadığınız yere;

a) Uzak b)Yakın

20. Hastalığınızın meslek hayatınızı olumsuz yönde etkilediğini düşünüyor musunuz?

Evet _____ Hayır _____

21. Hastalığınızın sosyal hayatınızı olumsuz yönde etkilediğini düşünüyor musunuz?

Evet _____ Hayır _____

22. Hastalığınızın aile içi ilişkilerinizi olumsuz yönde etkilediğini düşünüyor musunuz?

Evet _____ Hayır _____

Appendix.4.Travma Sonrası Gelişim Ölçeği / Posttraumatic Growth Inventory

Aşağıda hastalığınızdan dolayı yaşamınızda olabilecek bazı değişiklikler verilmektedir. Her cümleyi dikkatle okuyunuz ve belirtilen değişikliğin sizin için ne derece gerçekleştiğini aşağıdaki ölçeği kullanarak belirtiniz.

0= Hastalığımdan dolayı böyle bir değişiklik yaşamadım.
1= Hastalığımdan dolayı bu değişikliği çok az derecede yaşadım.
2= Hastalığımdan dolayı bu değişikliği az derecede yaşadım.
3= Hastalığımdan dolayı bu değişikliği orta derecede yaşadım.
4= Hastalığımdan dolayı bu değişikliği oldukça fazla derecede yaşadım.
5=Hastalığımdan dolayı bu değişikliği aşırı derecede yaşadım.

	Hiç yaşamadım					Aşırı derecede yaşadım
1. Hayatıma verdiğim değer arttı.	0	1	2	3	4	5
2. Hayatımın kıymetini anladım.	0	1	2	3	4	5
3.Yeni ilgi alanları geliştirdim.	0	1	2	3	4	5
4.Kendime güvenim arttı.	0	1	2	3	4	5
5.Manevi konuları daha iyi anladım.	0	1	2	3	4	5
6.Zor zamanlarda başkalarına güvenebileceğimi anladım.	0	1	2	3	4	5
7.Hayatıma yeni bir yön verdim.	0	1	2	3	4	5
8.Kendimi diğer insanlara yakın hissetmeye başladım.	0	1	2	3	4	5
9.Duygularımı ifade etme isteğim arttı.	0	1	2	3	4	5
10.Zorluklarla başa çıkabileceğimi anladım.	0	1	2	3	4	5
11.Hayatımı daha iyi şeyler yaparak geçirebileceğimi anladım.	0	1	2	3	4	5
12. Olayları olduğu gibi kabullenmeyi öğrendim.	0	1	2	3	4	5
13.Yaşadığım her günün değerini anladım.	0	1	2	3	4	5
14.Hastalığımdan sonra benim için yeni fırsatlar doğdu.	0	1	2	3	4	5
15. Başkalarına karşı şefkat hislerim arttı.	0	1	2	3	4	5
16.İnsanlarla ilişkilerimde daha fazla gayret göstermeye başladım.	0	1	2	3	4	5
17.Değişmesi gereken şeyleri değiştirmek için daha fazla gayret göstermeye başladım.	0	1	2	3	4	5
18.Dini inancım daha da güçlendi.	0	1	2	3	4	5
19.Düşündüğümden daha güçlü olduğumu anladım.	0	1	2	3	4	5
20.İnsanların ne kada iyi olduğu konusunda çok şey öğrendim.	0	1	2	3	4	5
21.Başkalarına ihtiyacım olabileceğini kabul etmeyi öğrendim.	0	1	2	3	4	5

Appendix.5. Umut Ölçeği / The Hope Scale

Yönerge: Lütfen her bir maddeyi dikkatlice okuyunuz. Aşağıda verilen ölçeği kullanarak, sizi en iyi tanımlayan rakamı **1:** (Kesinlikle Katılmıyorum), **2:** (Kısmen Katılmıyorum), **3:** (Kısmen Katılıyorum), **4:** (Kesinlikle Katılıyorum), verilen boşluğun önüne yazınız. AĢağıda verilen ölçeği kullanarak cevaplamaya baĢlayınız. Bu envantere vereceğiniz cevaplar yalnızca araştırma amacıyla kullanılacağından gizli tutulacaktır.
İlgi ve desteğiniz için teşekkürler.

1: Kesinlikle Katılmıyorum
2: Kısmen Katılmıyorum
3: Kısmen Katılıyorum
4:Kesinlikle Katılıyorum

____1. Sıkıntılı bir durumdan kurtulmak için pek çok yol düşünebilirim.
____2. Enerjik bir biçimde amaçlarıma ulaşmaya çalışırım.
____3. Çoğu zaman kendimi yorgun hissederim.
____4. Herhangi bir problemin bir çok çözüm yolu vardır.
____5. Tartışmalarda kolayca yenik düşerim.
____6. Sağlığım için endişeliyim.
____7. Benim için çok önemli şeylere ulaşmak için pek çok yol düşünebilirim.
____8. Başkalarının pes ettiği durumlarda bile, sorunu çözecek bir yol bulabileceğimi bilirim.
____9. Geçmiş yaşantılarım beni geleceğe iyi biçimde hazırladı.
____10. Hayatta oldukça başarılı olmuşumdur.
____11. Genellikle endişelenecek bir şeyler bulurum.
____12. Kendim için koyduğum hedeflere ulaşırım.

Appendix.6. Algılanan Çok Yönlü Sosyal Destek Ölçeği / Multidimensional Scale of Perceived Social Support

Aşağıda 12 cümle ve her birinde de cevaplarınızı işaretlemeniz için 1 den 7ye kadar rakamlar verilmiştir. Her cümlede söyleneni sizin için ne kadar çok doğru olduğunu veya olmadığını belirtmek için o cümle altındaki rakamlardan yalnız bir tanesini daire içine alarak işaretleyiniz. Bu şekilde 12 cümlenin her birinde bir işaret koyarak cevaplarınızı veriniz.

1. İhtiyacım olduğunda yanımda olan özel bir insan var.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

2. Sevinç ve kederimi paylaşabileceğim özel bir insan var.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

3. Ailem bana gerçekten yardımcı olmaya çalışır.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

4. İhtiyacım olan duygusal yardımı ve desteği ailemden alırım.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

5. Beni gerçekten rahatlatan bir insan var.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

6. Arkadaşlarım bana gerçekten yardımcı olmaya çalışırlar.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

7. İşler kötü gittiğinde arkadaşlarıma güvenebilirim.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

8. Sorunlarımı ailemle konuşabilirim.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

9. Sevinç ve kederlerimi paylaşabileceğim arkadaşlarım var.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

10. Yaşamımda duygularıma önem veren özel bir insanım.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

11. Kararlarımı vermede ailem bana yardımcı olmaya isteklidir.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

12. Sorunlarımı arkadaşlarımla konuşabilirim.

Kesinlikle Hayır	1	2	3	4	5	6	7	Kesinlikle Evet

Appendix.7. Rotter's Internal External Locus of Control Scale/Rotter'in İç-Dış Kontrol Odağı Ölçeği

Bu anket, bazı önemli olayların insanları etkileme biçimini bulmayı amaçlamaktadır. Her maddede 'A' ya da 'B' harfleriyle gösterilen iki seçenek bulunmaktadır. Lütfen, her seçenek çiftinde sizin kendi görüşünüze göre gerçeği yansıttığına en çok inandığınız cümleyi (yalnızca bir cümleyi) seçiniz ve bir yuvarlak içine alınız.

1. A. Ana-babaları çok fazla cezalandırdıkları için çocukları problemli olur.

B. Günümüz çocuklarının çoğunun problemi, ana-babaları tarafından aşırı serbest bırakılmalarıdır.

2. A. İnsanların yaşamındaki mutsuzluklarının çoğu, biraz da şansızlıklarına bağlıdır.

B. İnsanların talihsizlikleri kendi hatalarının sonucudur.

3. A. Savaşların başlıca nedenlerinden biri, halkın siyasete yeterince ilgilenmemesidir.

B. İnsanlar savaşı önlemek için ne kadar çaba harcarsa harcasın, her zaman savaş olacaktır.

4. A. İnsanlar bu dünyada hak ettikleri saygıyı er geç görürler.

B. İnsan ne kadar çabalasa çabalasın ne yazık ki değeri genellikle anlaşılmaz.

5. A. Öğretmenlerin öğrencilere haksızlık yaptığı fikri saçmadır

B. Öğrencilerin çoğu, notların tesadüfi olaylardan etkilendiğini fark etmez.

6. A. Koşullar uygun değilse insan başarılı bir lider olamaz.

B. Lider olamayan yetenekli insanlar fırsatları değerlendirememiş kişilerdir.

7. A. Ne kadar uğraşsanız da bazı insanlar sizden hoşlanmazlar.

B. Kendilerini başkalarına sevdiremeyen kişiler, başkalarıyla nasıl geçinileceğini bilmeyenlerdir.

8. A. İnsanların kişiliğinin belirlenmesinde en önemli rolü kalıtım oynar.

B. İnsanların nasıl biri olacaklarını kendi hayat tecrübeleri belirler.

9. A. Bir şey olacaksa, eninde sonunda olduğuna sık sık tanık olmuşumdur.

B. Ne yapacağıma kesin karar vermek kadere güvenmekten daima daha iyi olur.

10. A. İyi hazırlanmış bir öğrenci için, adil olmayan sınav hemen hemen söz konusu olmaz.

B. Sınav sonuçları derste işlenenle çoğu kez o kadar ilgisiz oluyor ki, çalışmanın anlamı kalmıyor.

11. A. Başarılı olmak, çok çalışmaya bağlıdır şansın bunda payı ya hiç yoktur ya da çok azdır.

B. İyi bir iş bulma temelde, doğru zamanda doğru yerde bulunmaya bağlıdır.

12. A. Hükümetin kararlarında sade vatandaş da etkili olabilir.

B. Bu dünya güç sahibi birkaç kişi tarafından yönetilmektedir ve sade vatandaşın bu konuda yapacağı fazla bir şey yoktur.

13. A. Yaptığım planları yürütebileceğimden hemen hemen eminimdir.

B. Çok uzun vadeli planlar yapmak her zaman akıllıca olmayabilir, çünkü birçok şey zaten iyi ya da kötü şansa bağlıdır.

14. A. Hiçbir yönü iyi olmayan insanlar vardır.

B. Herkesin iyi bir tarafı vardır.

15. A. Benim açımdan istediğimi elde etmenin şansla bir ilgisi yoktur.

B. Çoğu durumda, yazı-tura atarak da isabetli kararlar verebiliriz.

16. A. Kimin patron olacağı, genellikle, doğru yerde ilk önce bulunma şansına kimin sahip olacağına bağlıdır.

B. İnsanlara doğru şeyleri yaptırmak bir yetenek işidir; şansın bunda payı ya hiç yoktur ya da azdır.

17. A. Dünya meseleleri söz konusu olduğunda, çoğumuz anlayamadığımız ve kontrol edemediğimiz güçlerin kurbanıyızdır.

B. İnsanlar siyasal ve sosyal konularda aktif rol alarak dünya olaylarını kontrol edebilirler.

18. A. Birçok insan rastlantıların yaşamlarını ne derecede etkilediğinin farkında değildir.

B. Aslında ‘şans’ diye bir şey yoktur.

19. A. İnsan, hatalarını kabul edebilmelidir.

B. Genelde en iyisi insanın hatalarını örtbas edebilmesidir.

20. A. Bir insanın sizden gerçekten hoşlanıp hoşlanmadığını bilmek zordur.

B. Kaç arkadaşımızın olduğu, ne kadar iyi olduğunuza bağlıdır.

21. A. Uzun vadede, yaşamınızdaki kötü şeyleri iyi şeyler dengeler.

B. Çoğu şansızlıklar yetenek eksikliğinin, ihmalin, tembelliğin ya da her üçünün birden sonucudur.

22. A. Yeterli çabayla siyasal yolsuzlukları ortadan kaldırabiliriz.

B. Siyasetçilerin kapalı kapılar ardında yaptıkları üzerinde halkın fazla bir kontrolü yoktur.

23. A. Öğretmenlerin verdikleri notları nasıl belirlediklerini bazen anlamıyorum.

B. Aldığım notlarla çalışma derecem arasında doğrudan bir bağlantı vardır.

24. A. İyi bir lider, ne yapacaklarına halkın bizzat karar vermesini bekler.

B. İyi bir lider herkesin görevinin ne olduğunu bizzat belirler.

25. A. Çoğu kez başıma gelenler üzerinde çok az etkiye sahip olduğumu hissederim.

B. Şans ya da talihin yaşamımda önemli bir rol oynadığına inanırım.

26. A.İnsanlar arkadaşça olmaya çalışmadıkları için yalnızdırlar.

B. İnsanları memnun etmek için çok fazla çabalamanın yararı yoktur, sizden hoşlanırlarsa hoşlanırlar.

27. A. Liselerde atletizme gereğinden fazla önem veriyorlar.

B. Takım sporları kişiliğin oluşumu için mükemmel bir yoldur.

28. A. Başıma ne gelmişse, kendi yaptıklarımdandır.

B. Yaşamımın alacağı yön üzerinde bazen yeterince kontrolümün olmadığını hissediyorum.

29. A. Siyasetçilerin neden öyle davrandıklarını çoğu kez anlayamıyorum.

B. Yerel ve ulusal düzeydeki kötü idarelerden uzun vadede halk sorumludur.

AUTOBIOGRAPHY

Başak Bağlama was born in Nicosia 1990, went to Şht. Tuncer Primary School, Bayraktar Türk Maarif Koleji and Türk Maarif Koleji and graduated with high degree.

In 2007, she entered the department of Psychology at Middle East Technical University. She passed English Proficiency Exam and directly started to the Psychology program. She graduated from the department with honor degree in 2011.

She attended to several psychology conferences, educations and seminars. She completed her internship at Özel Eğitim Vakfı in 2009.
In 2012, she started Applied (Clinical) Psychology Master Program at Near East University Graduate School Of Social Sciences. She completed her internship at Hospital of Barış Mental and Nurological Disorders .

She prepared her master thesis about " The Role of Social Support, Dispositional Hope and Internal-External Locus of Control Among Postoperative Breast Cancer Patients" and succesfuly graduated from the Applied (Clinical) Psychology Program in June 2014.