POSTTRAUMATIC GROWTH AND PSYCHOLOGICAL DISTRESS AMONG RHEUMATOID ARTHRITIS PATIENTS: AN EVALUATION WITHIN THE CONSERVATION OF RESOURCES THEORY

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ABSTRACT

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Rheumatoid arthritis (RA) is a chronic, deteriorative disease, which leads to psychological distress. 'Conservation of Resources theory (COR)' is a relatively recent stress model, developed by Hobfoll (1988, 1989). This resource-oriented theory is based on the assumption that psychological stress is a reaction to a threat of loss of resources, loss of resources and/or lack of resource gain after investment in resources. Religiousness, coping abilities, coping self-efficacy and social support are very important personal resources, which have been found to protect individuals against psychological distress. The aim of the present study was to examine the predictive values of socio-demographic and illness related variables, religiousness, perceived social support, ways of coping, resource loss and arthritis self efficacy for

both psychological distress (anxiety and depression) and posttraumatic growth (PTG) of RA patient. In addition, the COR theory was tested for a chronic debilitating illness. Data were collected by administering eight scales to one hundred and seventeen RA patients in the Rheumatology and Physical Medicine and Rehabilitation Clinics of Ankara Numune Hospital. As a result of the regression analysis, it was found that being female, fatigue, resource loss, helplessness coping and perceived social support were significant predictors of anxiety. Impact of illness on daily activities, resource loss, problem solving coping and arthritis self-efficacy were significant predictors of depression. Gender, perceived severity of the illness, perceived social support and problem solving coping were significant predictors of PTG. Perceived social support was not related to depression and total psychological distress whereas it was related to anxiety and PTG. Religiousness was not related to psychological distress and PTG. The results of the study were discussed within the relevant literature, shortcomings of the current study, clinical implications and suggestions for future research were proposed.

Keywords: Posttraumatic Growth, Psychological Distress; Depression and Anxiety Rheumatoid Arthritis, Resources, Conservation of Resources Theory

ÖZ

ROMATOİD ARTRİT HASTALARINDA TRAVMA SONRASI GELİŞİM VE PSİKOLOJİK SIKINTILAR: KAYNAKLARIN KORUNMASI KURAMI KAPSAMINDA BİR DEĞERLENDİRME

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Romatoid artrit psikolojik sıkıntılar yaşanmasına neden olan kronik ve ilerleyici bir hastalıktır. Kaynakların korunması kuramı ise Hobfoll (1988, 1989) tarafında son yıllarda geliştirilmiştir. Bu kurama göre psikolojik sıkıntılar kaynak kaybına yönelik tehdit, kaynakların kaybı ve/veya kaynak yatırımı yapıldıktan sonra yeni kaynak kazanılamamasına yönelik tepkilerden kaynaklanmaktadır. Dindarlık, baş etme yolları, başa çıkma özyeterliği ve sosyal destek önemli kişisel kaynaklardır ve bireyi psikolojik sıkıntılar yaşamaktan koruyan faktörler olarak bulunmuşlardır. Bu çalışmanın amacı dindarlık, algılanan sosyal destek, baş etme yolları, kaynak kaybı ve artrit özyeterliği, sosyodemografik ve hastalıkla ilgili değişkenlerin psikolojik sıkıntılara (kaygı ve depresyon) ve travma sonrası gelişime olan

etkilerinin incelenmesidir. Ayrıca COR kuramını kronik, ilerleyici bir hastalıkta test etmektir. Ankara Numune Hastanesinin Romatoloji ve Fizik Tedavi ve Rehabilitasyon kliniklerinde 117 hastaya 8 ölçek uygulanmıştır. Sonuçların değerlendirilmesinde regresyon analizi kullanılmıştır. Sonuç olarak, kadın olmak, yorgunluk düzeyi, kaynak kaybı, çareşiz baş etme ve algılanan sosyal destek kaygıyı yordamada anlamlı bulunmuştur. Hastalığın günlük aktiviteleri etkileme düzeyi, kaynak kaybı, problem odaklı baş etme ve artrit öz yeterliği depresyonu yordamada anlamlı bulunmuştur. Kadın olma, hastalık şiddeti, algılanan sosyal destek ve problem odaklı baş etme travma sonrası gelişimi yordamada anlamlı bulunmuştur. Algılanan sosyal destek depresyon ve genel psikolojik sıkıntılar ile ilişkili bulunmazken kaygı ve travma sonrası gelişim ile ilişkili bulunmuştur. Dindarlık ne psikolojik sıkıntılar ne de travma sonrası gelişim ile ilişkili bulunmamıştır. Çalışmanın sonuçları ilgili literatür çerçevesinde tartışılmıştır. Ayrıca çalışmanın kısıtlılıkları, klinik göstergeleri tartışılmış ve gelecek çalışmalar için önerilerde bulunulmuştur.

Anahtar kelimeler: Travma Sonrası Gelişim, Psikolojik Sıkıntılar; Depresyon ve Kaygı, Romatoid Artrit, Kaynaklar, Kaynakların Korunması Kuramı

To My Family

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TABLE OF CONTENTS

LIST OF TABLES

TABLES

CHAPTER I

INTRODUCTION

Chronic physical illnesses, which affect a large proportion of the population, are stressful life events. Rheumatoid Arthritis (RA), a chronic, deteriorative disease, is one of these chronic illnesses. RA is associated with a significant amount of stress, due to severe pain, loss of vital functions and disruption of daily routines. 'Conservation of Resources model (COR)' is a relatively recent stress model, developed by Hobfoll (1988, 1989). Hobfoll (1989) defines psychological stress as a reaction to a threat of loss of resources, loss of resources and/or lack of resource gain after investment in resources. Several researchers showed that chronic diseases often result in the depletion of resources (Anderson, Bradley, Young, McDaniel, & Wise, 1985; Lane & Hobfoll, 1992). The COR framework may provide important insights for the study of psychological distress of RA patients. Additionally, although there are many studies using Hobfolls' (1988, 1989) COR model of stress with survivors of natural disasters (earthquake, floods etc.), there is limited number of studies with other populations in the literature. Therefore, the present study aims to fill the gap by studying psychological reactions in RA patients within the COR model.

Stress is a crucial factor related to several psychological problems such as depression and anxiety. However, it may also lead to an experience of posttraumatic growth in individuals. Therefore, in the present study both distress and growth will

be examined. Religiousness, coping abilities, social support and coping self-efficacy are very important personal resources, which may have significant effects on responses of individuals to stressful life events. Thus, the current study investigated variables related to emotional distress and posttraumatic growth in RA patients. The study aims to make recommendations for RA patients and their caregivers in dealing with psychological distress and in facilitating positive outcomes from their debilitating illness. Furthermore, the COR model will be tested for a chronic illness.

1.1 Rheumatoid Arthritis (RA)

RA is a common, chronic and painful disease. The etiology of RA is unknown, and treatment provides only symptomatic relief, not a total cure. RA affects about 1% of the population. It is more prevalent among women, and its onset is between the ages of 35 and 50. The symptoms of the disease are chronic pain, fatigue, swollen joints, stiffness, unpredictability and inevitable disability. The treatment of RA includes medication, rest and exercise (Lipsky, 1991). Although some investigators claim that there is no total cure for RA other investigators claime that RA could be cured completely. When the onset of RA occurs before any irreversible joint damage or cartilage damage then RA may be cured completely. Erosion of bone and cartilage (permanent damage) occurs within 3 years of disease initiation. Therefore, RA should be treated as soon as possible. (Moreland, 2001).

There are several risk factors associated with RA, which are genetics, infectious agents, smoking and genetic predisposition to RA. Studies revealed that there is a genetic predisposition to RA. Although, some studies claim that

infectious/environmental component has a role in the occurrence of RA disease, this hypothesis was not generally supported. Some investigators propose that oral contraceptives have a protective effect against the development of RA. Cigarette smoking is also found as an independent risk factor in the development of RA in some studies. Lastly, low level of education (years of education) was also found to be related to increased mortality and poor clinical status. Although, researchers propose about several risk factors in the development of RA, the etiology of the disease is largely unknown (Gabriel, 2001).

The mortality rate for RA patients was found to be higher than those among non-RA people. The reasons for increased mortality are that RA patients have a higher risk to have gastrointestinal, respiratory, cardiovascular, infectious and hematological disease than normal people (Gabriel, 2001).

Medical treatment of RA includes four major groups of medication, which are nonsteroidal anti-inflammatory drugs (NSAID), disease-modifying antirheumatic drugs (DMARDs), biologic response modifiers (BRMs) and corticostreoids (Shlozhauer, 2003).

Psychosocial interventions, which are counseling, provision of information (education), psychotherapy, biofeedback and support groups have been used with RA patients in order to enhance their psychological well-being and health status. Specifically, cognitive-behavioral therapy techniques such as relaxation, imagery, problem solving, the setting of personal goals and the restructuring of maladaptive ways of thinking have been used. In addition, psychosocial interventions include planning of daily activities and communication skills. Another treatment specific to arthritis is the Arthritis Self-Management Programme (ASMP) which is conveyed by

people who themselves also have arthritis and convey this programme is applied in community settings. The purpose of this programme is to teach various skills to manage various facets of RA by enhancing patients' self efficacy (Newman & Mulligan, 2000).

1.2 An Overview of Psychological Effects of Rheumatoid Arthritis on Patients

1.2.1 Psychological Distress

Table 1 summarizes some studies conducted over the last ten years related to psychological distress of RA patients.

Table 1.
Studies related with pychological distress of RA patients

Study	Design	Participants	Independent Variables	Dependent Variables & Instruments	Results
Barlow, Cullen, & Rowe (1999)	Cross sectional	2 group RA patients 1. Group 33 RA patients with a disease duration of <1 year 2. Group 69 RA patients wit a disease duration of >10 years	• Demographic and disease variables • Disease acceptance • RA knowledge	• Depression and anxiety • VAS (For pain and fatigue) • HAQ • HADS • AIS • RAPKQ	Patients with short disease duration were significantly younger, had more education and had less physical dysfunction. The level of anxiety, depression, acceptance of illness, pain and knowledge about RA were similar in both groups. The predictors of depression were acceptance of illness, fatigue, shorter disease duration and physical disability whereas predictors of anxiety were acceptance of illness and pain.

Table 1 *continued*

Chaney, Mullins, Uretsky, Doppler, Palmer, Wees, Klein, Doud, & Reiss (1996)	Cross sectional	58 RA outpatients	• Demographic and disease variables • Perceived illness control	• Depression • IDD • ASQ • AHI • HAQ • Disease severity questions • Perceived illness control questions	Perceived illness control was a moderator between attributional style and depression. In other words, an increased level of depression under conditions of decreased perceived illness control was related with internal and global attributions for negative events. Results supported cognitive diathesis-stress conceptualizations of adjustment to a chronic disease.

Table 1 *continued*

Chaney, Mullins, Wagner, Hommel, Page, & Doppler, (2004)	Longitudinal	42 RA patients	• Demographic and disease variables • Pain and disability • Attributional style	• Depression • IDD • ASQ • HAQ	Time 1-depression symptoms were predicted by attributions for negative events. At time 2, time 1-depression symptoms were unrelated to attributions after perceived pain and disability were controlled. Although initial level of attributions predicted subsequent depression, initial levels of depression were unrelated to later attributions. These results supported the cognitive-diathesis model of depression in RA.

Table 1 *continued*

Dickens, Jackson, Tomenson, Hay, & Creed (2003)	Cross-sectional	74 females RA patients	• Demographics and disease related variables • Social difficulties	• Depression • Overall status in Rheumatoid arthritis • The Psychiatric Assessment Schedule • The Life Events and Difficulties Schedule • HAQ	Depressed RA patients had more social difficulties, both related and unrelated to RA than non-depressed RA patients. Depression was associated with only social difficulties. Demographic characteristics and rheumatoid arthritis were not related to diagnosis of depression.

Table 1 *continued*

Doeglas, Suurmeijer, van den Heuvel, Krol, van Rijswijk, van Leeuwen, & Sanderman (2004)	Longitudinal (4 year data collection)	T1 = 292 RA patients T4 = 264 RA patients	• Functional ability • Social support	• Depression • GHQ • SSQS • SSQT • GARS	Depression level was similar at T1 and T4. Although there were no significant differences in social companionship satisfaction (SSC) between the 4 points of measurement, emotional support satisfaction (ESS) level increased slowly over the years. Patients with high – functional disability had more depression level at each 4-measurement time. Depression at T4 was predicted by depression feeling at T1, SSC, ESS, and interaction of ESS and activity restriction level.

Table 1 *continued*

El-Miedany & El Rasheed (2002)	Cross sectional	80 RA patients	• Demographic and disease variables • Functional impairment • Pain • Social stress	• Depression and anxiety • RAI • HAQ • Social stress questions • VAS (for pain) • ICD-10	Prevalence of anxiety was higher than depression. Both anxiety and depression were more common in males than females. Depression was significantly related to functional disability, morning stiffness and being married. Anxiety was significantly associated with social stress, RAI, short disease duration, morning stiffness, rheumatoid factor, nodules and having children (negative association).

Table 1 *continued*

Murphy, Dickens, Creed, & Bernstein (1999)	Cross-sectional	62 RA outpatients	• Demographic and disease variables • Adverse experiences in childhood • Coping	• Depression • HADS • IPQ • LCRAQ • CDQ • HAQ	The comparison between depressed and non-depressed patients revealed that, depressed patients experienced more disability, viewed their illness as causing more serious consequences and believed they had less control over their illness and used more negative coping strategies. They found that there was no relationship between depression and childhood adversity. After controlling for the effects of disability, the perceived ability to control the illness was negatively whereas viewing the consequences of the illness negatively was positively related to depression.

Table 1. *continued*

Nagyova, Stewart, Macejova, van Dijk, van den Heuvel (2005)	Longitudinal (assessment was done annually over a 4-year period)	160 recently-diagnosed RA outpatients	• Demographics and disease related variables • Pain • Self esteem and adjustment to disease (mediator)	• Psychological well-being • RAI • NHP • RSE • GARA • GHQ -28	Self-esteem and adjustment to disease were mediator variables between pain and psychological variables. Better psychological well-being was significantly correlated with higher self esteem, better adjustment to disease, and less pain.
Sharpe, Sensky, & Allard (2001)	Cross-sectional & Longitudinal	* 53 RA patients was included in baseline assessment * 22 RA patients were also assessed on five further occasions (6 assessments)	• Demographics and disease related variables • Initial levels of depression • Disability • Pain • Beliefs about consequences of arthritis • Coping strategies	• Depression • HADS • The Coping Strategies Questionnaire • The illness Perception Questionnaire • HAQ • VAS for pain • RAI	The mood of RA patients deteriorated over time (patients became more depressed). Follow up depression levels were consistently associated with initial levels of depression, disability, pain, beliefs about the consequences of arthritis and coping strategies.

Table 1 *continued*

VanDyke, Parker, Smarr, Hewett, Johnson, Slaughter, & Walker (2004)	Cross sectional	* RA patients * Osteoarthritis patients * RA patients with major depression * Age-equivalent working adults	• Demographic and disease variables • Depression	• Anxiety • STAI • SCL-90 • AIMS • CES-D • DSI • HS	RA patients had higher level of trait anxiety than normative (no patients) group. However, both RA patients and no patients had similar levels of state anxiety. Depressed RA patients had higher level of both state and trait anxiety than normative group. Anxiety was significantly correlated with depression and stress. However, anxiety was not significantly related with RA disease duration.

AHI (Arthritis Helplessness Index), AIMS (Arthritis Impact Measurement Scale), AIS (Acceptance of Illness Scale), ASQ (The Attributional Style Questionnaire), CDQ (Childhood Development Questionnaire), CES-D (Center for Epidemiological Studies Depression Scale), DSI (Daily Stress Inventory), GARA (General adjustment to rheumatoid arthritis), GARS (Groningen Activity Restriction Scale), GHQ-28 (General Health Questionnaire), HADS (Hospital Anxiety and Depression Scale), HAQ (Health Assessment Questionnaire), HS (Hassles Scale), ICD-10 (International Classification of Disease), IDD (The Inventory to Diagnose Depression), IPQ (Illness Perception Questionnaire), LCRAQ (London Coping with Rheumatoid Arthritis Questionnaire), NHP (Nottingham Health Profile), RAI (Ritchi Articuler Index), RAPKQ (Rheumatoid Arthritis Patients Knowledge Questionnaire), RSE (Rosenberg Self Esteem scale), SCL-90 (Symptom Checklist 90-R), SSQS (Social Support Questionnaire for Satisfaction), SSQT (Social Support Questionnaire for Transactions), STAI (state- Trait Anxiety Inventory), VAS (Visual Analogue Scale),

As summarized in Table 1, RA has profound psychological and social consequences, including disruptions in working capacity, social roles, independence, family functioning, and activities of daily life, self-concept, mood, and psychological distress. RA patients also exhibit a higher prevalence of emotional disorders especially anxiety and depression when compared to other chronic patients and healthy individuals (Altan, Bingöl, Sağırkaya, Sarandöl, & Yurtkuran, 2004; Anderson et al., 1985; Pincus, Griffith, Pearce, & Isenberg, 1996).

Taal, Rasker, Seydel, and Wiegman (1993) evaluated the health status and psychological variables in RA patients. They reported that the most important health related problems among RA patients are dependency feelings, pain and disability. O'Leary (1986) reported that due to increased pain during movement, RA patients become inactive and depressed. Pain and the immunological basis of the disease are also aggravated by inactivity and depression, which forms a vicious cycle.

Smedstad, Vaglum, Kvien, & Moum (1996) found that patients with RA show more depressive and anxiety symptoms than a matched control group. They also reported that although 20% of RA patients have a psychiatric disturbance only 6% of the control group has these problems. Another study also showed more depressive symptoms among RA patients as compared to people with no chronic disease (Pennix, et al., 1997).

Several researchers reported that depression is an important problem for RA patients (Abdel-Nasser, Abd El-Azim, Taal, El-Badowy, Rasker, & Valkenburg, 1998; Katz & Yelin, 1993; Walsh, Blancher, Kremer, and Blanchard, 1999). The prevalence of depression among them has been reported to be quite high. Walsh et al. (1999) reported that the prevalence rate of depression is 35.7% for patients and

23% for their partners. In their community based population study Soderlin, Hakala, & Nieminen (2000) reported that 20% of the RA patients had depression. Additionally Abdel-Nasser et al. (1998) reported that the depression level of RA patients were higher than osteoarthritis (OA) patients. Although 23% of RA patients were diagnosed as depressed, only 10% of OA patients were diagnosed as depressed.

Only a few studies investigated predictors of depression in RA patients. Many of them reported that depression levels of RA patients were related to the functional status of patients. Kraaimat, Van Dam-Baggen, & Bijlsma (1995) reported that anxiety and depression in RA patients is related to high levels of criticism of the spouse and low levels of social support. Pain is a significant and an important predictor of psychological well-being (Nagyova et al., 2005). Pain decreases level of psychological well-being and increase risk experience of depression and anxiety in RA patients. Social difficulties are also significant predictors of depression (Dickens, et al., 2003).

Tsai (2005) investigated predictors of distress and depression in elders with arthritis. Chronic pain theory was tested with 235 elders with all types of arthritis. It was found that disability, financial hardship, social support and age explained 24% of the variance in distress. Social support and age negatively predicted distress, whereas, disability and financial hardship positively predicted distress. In other words, arthritic elders with less social support, younger age, and higher levels of disability or with more financial hardship are more likely to experience distress. Distress led to depression. Distress explained 33% of the depression. Furthermore, pain and disability directly related to depression. This means that arthritic elders with more frequent pain and more disability are likely to have higher levels of depression.

Anxiety is another emotional disturbance, which is commonly experienced by RA patients. El-Miedany and El-Rashed (2000) reported that anxiety is more common than depression in RA patients, the prevalence rates of anxiety and depression has been reported as 70% and 66.2% respectively. Other researchers reported that RA patients have similar levels of state anxiety levels with normative sample. However, trait anxiety levels were significantly higher than a normative group (VanDyke, et al., 2004).

More recently, the relationship between two personality characteristics (neuroticism, extraversion) three types of supportive transactions (emotional support, social companionship, instrumental support) and satisfaction with these transactions and psychological distress (anxiety and depression) were investigated among early rheumatoid arthritis patients (duration of disease four years or less). (Suurmeijer, et al., 2005). Researchers noted that higher level of neuroticism is associated with higher levels of anxiety and depression; however, extraversion did not have a direct effect on anxiety or depression. Both social companionship and satisfaction negatively related to depression, however they have no independent effect on anxiety. That is people with more companionship reported less depressed mood. A higher level of instrumental support was related to higher level of depression, but satisfaction with instrumental support was negatively related to anxiety. So, it seems that providing instrumental support can undermine the patients coping or it may be related to severe illness and thus need for more support.

1.2.2 Posttraumatic Growth (PTG)

Although the negative consequences of traumatic events have been mostly studied, they may also lead to positive experiences in survivors (Calhoun, Cann, Tedeschi, & McMillan, 2000; Powell, Rosner, Butollo, Tedeschi, & Calhoun, 2003a). Positive change following trauma and adversity has also been labeled as posttraumatic growth, stress related growth, positive adjustment, positive adaptation, thriving, positive by products, and blessings. Linley and Joseph (2004) refered to the positive changes following trauma as adversial growth. In the present study, PTG was examined to understand the positive changes following RA.

The definition of posttraumatic growth is very difficult and it is a very complex construct. It was conceptualized by Tedeschi, Park and Calhoun (1998) as significant change in emotions and cognitions, which may lead to change in behaviors as well. The positive change leads to higher levels of functioning that individual had prior to the event. Tedeschi and Calhoun (1995) reported that these positive changes occurred in three different domains; changes in self-perception, changes in interpersonal relationships, and changes in philosophy of life.

Traumatic events lead to a disruption in individuals' relationships, changes in their roles and also shake basic values and beliefs. Although individuals experience these negative changes in the aftermath of stressful life crisis, they may also experience positive changes like enhancement to broaden life perspectives, development of personal and social resources and coping skills (Park & Fenster, 2004).

PTG begins to receive wide spread attention recently. Studies have shown that individuals may experience posttraumatic growth after exposure to traumas such as war (Powell, et al., 2003a), sexual assault (Frazier, Conlon, & Glaser, 2001), bereavement among HIV/AIDS caregivers (Cadell, Regehr, & Hemsworth, 2003), in husbands of breast cancer survivors (Weiss, 2002), cancer patients (Bellizzi & Blank, 2006; Cordova, Cunningham, Carlson, & Andrykowski, 2001), Turkish breast cancer patients (Kesimci, 2003), parents of Turkish austistic children (Elçi, 2004), and heart patients (Sheikh, 2004).

Several studies have reported relationships between PTG and personal resources, including religiousness (Park & Fenster, 2004), coping strategies (Aldwin, Sutton, & Lachman, 1996), self-efficacy (Carver, 1998), and social resources (social support) (Carver, 1998). In addition, some socio-demographic characteristics were also found to be related to PTG. Generally, females report more PTG than males (Park, Cohen, & Murch, 1996; Tedeschi & Calhoun, 1996), however, gender differences were not found in other studies (Polatinsky & Esprey, 2000). Other variables such as age and length of illness were not found to be related to PTG (Abraido-Lanza, Guier, & Colon, 1998) however, in other studies, age (Polatinsky & Esprey, 2000), education (Updergraff, Taylor, Kemeny, & Wyatt, 2002), and income (Updergraff et al., 2002) were found as significant predictors of growth.

Everybody does not experience growth. Furthermore, people who report positive changes in some life domains do not mean they have no distress or psychological problems or have positive changes in all life domains (Calhoun & Tedeschi, 1998; Park et al., 1996). Calhoun and Tedeschi (1998) noted that women whose husbands had been murdered in a robbery experienced distress and elements

of thriving at the same time. In other words, although individuals experience growth, this may not lead to an improvement in their psychological adjustment and distress and growth can be experienced at the same time.

Bellizzi and Blank (2006) examined predictors of PTG in breast cancer survivors. It was found that age at diagnosis, marital status, employment, and education, perceived intensity of disease and active coping related to growth in all domains. Namely, relationship with others, new possibilities, and appreciation for life.

Abraido-Lanzo et al. (1998) examined psychological thriving among Latinos in a 3-year longitudinal study on 66 patients who had rheumatoid arthritis, lupus, osteoarthritis, scleroderma arthritis, osteoporosis, fibromyalgia, or more than one type of arthritis. Abraido-Lanzo et al. (1998) investigated the predictive power of illness characteristics (pain, disability, and length of illness), social/cultural resources (social support, acceptance of disability, and acculturation) and personal resources (self esteem, self efficacy) over the illness, and positive and negative affect. They found that positive and negative affect influence self esteem and self-efficacy, which in turn predicts thriving. They also found that positive and negative affect had different effects on competence (self efficacy and self esteem) and thriving. In addition, initial greater negative affect led to a decrement in self-efficacy and self-esteem at 3-year follow up. Self-esteem, in turn, affected thriving. They also noted that positive, but not negative affect predicts thriving in Latinos with arthritis. Thriving was shown to be enhanced by psychological well-being, and not by ill-being.

Abraido-Lanzo et al. (1998) emphasized that both traumatic events and chronic illness leads to a change in the self-concept. They also demand the mobilization of social support and coping processes. In addition, stressful traumatic events may require several other psychosocial adaptive tasks.

Similarly, COR theory emphasized that individuals, families, tribes try to maintain, foster and protect their resources when exposed to traumatic events. Their purpose is to provide further resource protection by repairing their damage and mobilizing resources. In this process, they don't show only reactive behaviors to the stressors, they also show proactive behaviors. This result may lead to change in their reliance on themselves and on others (Hobfoll, 2001). This proposal of the COR theory may be accepted as a pertinent construct for PTG. Chronic illness provides a context to study PTG. Therefore, PTG was examined as a dependent variable in the current study. Personal and social resources that may predict PTG were examined as independent variables. Because resources are theorized to play a central role in the PTG process.

1.3. Models Explaining Psychological Distress and Posttraumatic Growth Following Stressful Life Events

1.3.1 Conservation of Resources Theory (COR)

COR model is one of the stress models, which was developed by Hobfoll (1988). Hobfoll defined psychological stress as a reaction to threat of loss of resources, loss of resources and lack of resource gain after the investment of

resources (Hobfoll, 1989). There are four kinds of resources, which are object resources such as ones' residence, medicine, transportation; energy resources such as time, income, education, insurance, credit, and knowledge; condition resources such as a stable marriage, secure employment, and finally personal resources such as self confidence. Norries and Kaniasty (1996) reported that stressful life events bring about reductions in resources. COR theory proposes that chronic stress is principal factor because it leads to resource loss and repeated investment of resources in the end causes partial or full exhaustion of resources. Psychological distress is the result of the interaction between personal, social and environmental factors (Hobfoll, 1989).

According to Hobfoll (2002) self-efficacy, optimism, self-esteem, sense of control, social support and goal pursuit, which are widely evaluated in many studies, are key resources. These key resources increase the resilience of individuals.

COR is an integrated resource theory. There are a number of other integrated resource theories, which are 'Coping Theory' of Holahan, Moos, Holahan, & Cronkite (1999, 2000); 'Coping-appraisal Theory' of Lazarus and Folkman (1984). In these models general resource use is evaluated as part of a dynamic process, which is associated with well-being.

According to the Coping Theory (Holahan et al., 1999, 2000) personal and social resources are needed to deal with stress. In this model, one resource is suggested to facilitate other resources. Furthermore, lack of resources leads to instability of resources and in turn leads to negative psychological outcomes.

According to Lazarus and Folkman (1984), psychological stress is a result of evaluations of personal resources as inadequate to cope with threatening environmental surroundings.

All these models on resources and stress have some common main points. First of all, resources are evaluated in general, rather then focusing on specific resources. Secondly, they explain the mechanism for well-being and health in terms of resource change that occurs as a result of encountering stressful life events. Finally, integrated resource models emphasize the importance of possession of reliable resources in maintaining well-being and health.

According to Hobfoll (2002) the major difference between Lazarus and Folkmans' theory (1984) and Hobfoll's (1988) theory is that the former primarily concentrates on appraisal, whereas the latter mainly focuses on environmental and ecological factors. In addition, Hobfoll emphasized the importance of culture to determine what the valued resources are (Hobfoll, 2001).

Although the results of key resource theories, for instance self-efficacy, optimism, and social support are convincing, these key resources need to be incorporated into an integrated model to understand the interaction of key resources (Hobfoll, 2002).

Conservation of resources theory (COR) was developed to explain the central mechanisms of stress and coping process (Hobfoll, 1989). According to Hobfoll's (1989, 1998) COR theory, resource loss is assumed to be the primary mechanism leading to distress reactions. At the same time, as resources are being lost, individuals try to minimize resource loss and maximize resource gain in order to limit psychological, social and objective impact of devastating events (Wells,

Hobfoll, & Lawin, 1999; Shteyn, Schumm, Vodopianova, Hobfoll, & Lilly, 2003). Personal and social resource losses have been identified as strong predictors of psychological and physical health in the aftermath of natural disasters such as floods (Smith & Freedy, 2000), hurricanes (Ironson, et al., 1997), earthquakes (Hsu, 2003). Similarly, Sümer, Karancı, Berument, & Güneş (2005) studied the psychological impact of resource loss in Turkish earthquake survivors and found that resource loss was related to increased psychological distress. The negative impact of resource loss was also shown in other traumatic life events, such as in patients with chronic illness (Lane & Hobfoll, 1992). In line with COR theory, Norris and Kaniasty (1996) noted that the impact of a disaster was higher among people whose resiliency resources were diminished than those who retained their coping resources.

Numerous studies utilized conservation of resources (COR) theory to test the relationship between resources possessed by individuals and their psychological effects in the context of natural disasters (Benight, et al., 1999a; Benight, Swift, Sanger, Smith, & Zeppelin, 1999). Many of these studies revealed that resource loss was the strongest predictor of depression, anxiety and anger (Hegstad, 2000; Lane & Hobfoll, 1992). Resource loss is also associated with somatic complaints and alcohol use.

Many chronic diseases like cancer, coronary artery disease, diabetes, and arthritis yield significant resource losses in the patients' lives (Thompson & Kyle, 2000). Extremely traumatic diseases, like cancer diagnosis and treatment create drastic changes in patients' lives due to loss and vulnerability. Additionally, cancer patients' children also feel greater losses as a result of their parents' disease and treatments (Leedham & Meyerowitz, 2000).

Chronic illnesses such as cancer, heart disease or arthritis cause physical and psychological losses. Physical losses include loss of energy, loss of physical strength, loss of abilities and deformities in physical appearance that result in occupational and leisure function losses. Chronic disease also initiates psychological losses, such as the loss of sense of control due to unpredictability, personal responsibility for the stressor and increased dependency (Thompson & Kyle, 2000).

Lane and Hobfoll (1992) evaluated the effects of resource loss in patients with severe chronic breathing disorder. They found that resource loss leads to anger feelings, which in turn, resulted in anger for support givers. This study revealed that resource loss due to chronic stress causes the depletion of both personal and social resources.

COR theory includes two major principles and several secondary corollaries. The first and most important principle is that *"resource loss is disproportionetly more salient than resource gain"* (Hobfoll, 2001, p.343). This means that gain has a secondary role in COR theory. The first principle of COR theory proposes that when individuals experience equal amounts of loss and gain, loss will have significantly greater impact in their lives. Moreover, resource gain has a greater importance in the context of resource loss, which means that resource gain becomes more important for individuals when they experience higher resource loss. According to Hobfoll (2001) this principle distinguishes COR theory from Lazarus and Folkmans' (1984) appraisal theory, which leaves the extent of loss and gain's impact up to individual assessment and does not emphasize the shared cultural nature of resource loss and gain assessments.

Several studies provide evidence for the primacy of resource loss in the stress process (Taylor, 1991; Thoits, 1993; Hobfoll & Lilly, 1993). Hobfoll and Lilly (1993) also found evidence for the first principle, that is resource loss is strongly related to distress. They reported that resource gain is related to psychological distress only after controlling for resource loss. Thus, gain was found to be related with psychological distress especially in the presence of loss.

The second COR principal proposes that *"people must invest in resources in order to protect against resource loss, recover from loses, and gain resources"* (Hobfoll, 2001, p. 349). According to Hobfoll (2001), social and economic resources are invested in order to provide stress resistance. A number of researchers examined different resources such as self-efficacy, optimism, and self-esteem (Bandura, 1997; Scheier & Carver, 1985) and found evidence to support this principle.

Besides the two main principles, COR theory includes four corollaries related to the first two principles. The first corollary, which is mainly related to the second principle is that individuals with less resources are more vulnerable to resource loss and they are less capable of resource gain and vice versa, is true. The second corollary is that those with greater resources are not only more capable of gain and also that gain leads to future gain. The third corollary is greatly pertinent with second corollary in that initial resource gain begets future gain and initial resources loss begets future loss. Although, initial level of resources is very crucial for future resource level, loss cycles will be more potent and quicker than gain cycles. The last corollary is that in order to preserve their resources, individuals who have limited resources are most probable to take a defensive posture (Hobfoll, 2001).

Hobfoll (1990) proposes that resource loss has an effect on anxiety, depression, anger, work functioning, self-esteem, and physical health of the individuals. In the present study, psychological adjustment of RA patients was evaluated within the COR model, hypothesizing that key personal resources which are self-efficacy, coping abilities, religiousness and perceived social support will influence the patients' psychological distress as measured by depressive and anxiety symptoms and their posttraumatic growth.

1.3.2 Growth Models

Although there are several growth models O'leary and Ickovics' (cited in Tedeschi and Calhoun, 1998), Schaefer and Moos' (1998) and Tedeschi and Calhouns' (1995) models were examined in the current study.

O'Leary and Ickovick (cited in Tedeschi and Calhoun, 1998) named positive change after trauma as thriving. O'Leary and Ickovicks (1995) reported three types of outcomes following the experienced challenge which are survival, recovery, or thriving. Survival includes never regaining previous level of functioning and individuals survive with impairment. Recovery includes regain homeostasis and return to previous level of functioning. Thriving includes growing and reaching to high level of psychosocial functioning beyond the previous level of functioning.

O'Leary (1998) noted that thriving is a transformative process. This process includes cognitive shift after confronting with a challenge, by examining personal priorities and reexamining the sense of self. Social roles can be changed which includes loss of an old role, acquisition of a new role (role of patient) and

rearranging of role priorities. This transformation occurs when the traumatic event is severe enough to shake the foundation of one's life, calling into question one's sense of purpose, meaning, or identity. Thriving leads to finding new interpersonal, emotional, and or spiritual meaning in life.

O'Leary (1998) reported that individual and social resources have a role in thriving. Individual resources include hardiness, optimism, active coping, sense of coherence, sense of humor, and self-efficacy. The social resources include maintaining social support, utilizing religious resource, securing and using community and institutional resources (O'Leary, 1998; O'Leary & Ickovicks (1995).

Schaefer and Moos' model (1998) is also other growth model. According to Schaefer and Moos (1998) personal factors, environmental factors, event related factors, appraisal and coping responses are determinants of positive outcomes. Personal factors include individuals' socio-demographic characteristics and personal resources such as health status, self-efficacy, resilience, motivation, and prior crisis experience. The environmental factors include social support from family, friends, and coworkers, finance, home and community living conditions. Event related factors compromise whether crisis affects an individual or a group of people, severity, duration and timing of event. Coping responses include approach coping or avoidance coping.

According to Schaefer and Moos' model environmental and personal factors influence life crisis and their aftermath and influence appraisal and coping responses, and thus bring about personal growth. This model proposed that three types of positive outcomes, such as enhanced social resources, enhanced personal resources and the development of enhanced coping skills may arise.

Another growth model is the model of Tedeschi and Calhoun (1995). Tedeschi and Calhoun have developed their theory based on the view that PTG is not merely a bunch of coping strategies to deal with traumatic events but it also includes transformation in survivor's thinking, feeling and/or behaving. According to this theory, traumatic event can lead to significant damage to existing schemas. In order to cope with the traumatic event, the survivor is forced to challenge existing schemas or invent new ones. Traumatic event can cause damage in invulnerability schemas of the survivor. Individual's personal schemas can be changed by attempts of survivors to understand why a stressful event occurred and these attempts cause the experience of great emotional distress. If these changes are positive, then they have been conceptualized as PTG (Tedeschi & Calhoun, 1995).

There are several factors that may contribute to the occurrence of PTG. One of them is rumination (Tedeschi & Calhoun, 1995). Rumination is a cognitive processing, including positive and negative thinking. Rumination after the event enables the survivor to give meaning to the traumatic event, understanding what has happened and what to do about it. Rumination is a helpful process to foster posttraumatic growth. The rumination period also strengthens the survivors' social connections because the survivor needs to talk about the event with other individuals. Tedeschi and Calhoun (1995) mentioned that recent rumination is helpful in fostering PTG however, long-term rumination may inhibit the development PTG due to focusing primarily on negative or intrusive thoughts.

According to Tedeschi and Calhoun (1995), PTG is a self-regulatory system including several factors. Personality characteristics are one of the contributiors to cope with stress. When the coping strategies, which the individual used, is not

satisfactory to deal with the traumatic situation, the survivor experiences emotional distress and challenge to existing schemas. This leads to constructive rumination and revision of existing schemas, and then the survivor uses general coping strategies and seeks social support from the environment. Then, as a result of the formation of new schemas PTG occurs.

PTG loop is completed when it positively affects the perception self and/or relationships with others. If the survivor has necessary personality and social resources and additional cognitive processing related with the event, this may cause additional growth, which is called wisdom.

1.3.3 Mechanism Through Which Resources Influence Psychological Well-being

There are some shared mechanisms among several resource theories (Hobfoll, 2002). These shared factors are:

1) Individuals try to get, keep and also promote resources in biological, cognitive and social area.
2) Stressful situations and their negative effects are less likely to happen to individuals with higher levels of resources since they are more likely to avoid high-risk situations. For instance, individuals with high self-efficacy avoid risky-sex behavior and they are less likely to get HIV virus. Thus, these individuals are not very likely to run into chief stressful situations.
3) Individuals with high levels of resources are able to solve problems better than individuals with low levels of resources.

4) Resource loss in negative circumstances has less negative effects for individuals who have high levels of resources.
5) All resources are associated with each other. Possession of a solid resource reservoir leads to the development of new resources.
6) Unlike the impact of stress, resources have long-term influence. Individuals with high levels of resources can easily handle stressful circumstances. However, for individuals with low levels of resources, stressful circumstances may become chronic.
7) Individuals with high levels of resources consider themselves and others more positively.

1.4 Factors Related to Psychological Distress and Posttraumatic Growth in Rheumatoid Arthritis Patients

Although there are several factors related to psychological distress and posttraumatic growth of RA patients, in the following sections only the variables examined in the current study will be discussed.

1.4.1 Socio-demographic Variables

Some of the socio-demographic variables, such as age, gender, education level, income, marital status, living place (urban/rural), were investigated as independent variables in the current study. Numerous studies revealed that age (Wright, et al., 1998; Jakobsson & Hallberg, 2002; Markenson, 1991; Polatinsky &

Esprey, 2000) being female (gender) (Dowdy, Dwyer, Smith, & Wallston, 1996) being unmarried (marital status) (Abdel-Nasser et al., 1998), education level (Markenson, 1991; Updergraff et al., 2002), and urban residence (Abdel-Nasser et al., 1998) were related with depression and post-traumatic growth of RA patients. These studies revealed that women, unmarried, lower educated, lower socio-economic class, urban resident patients experienced higher levels of depression. In other words, having low level of resources create potential for psychological distress or negative outcomes. Additionally, age was found to be related to well-being. Wright et al. (1998) reported that younger RA patients displayed higher levels of depressive symptoms than older RA patients. Personal resources have crucial role in COR theory. Some of the socio-demographic variables such as advancement in education, good marriage, adequate income, and personal health were considered as resources by COR model. According to COR theory, whether a stressful event creates a negative or a positive outcome may depend on a person's personal and coping resources. COR theory emphasized that individual's with high levels of initial personal and coping resources probably use more adaptive coping strategies and they probably experience more positive outcomes as a result of the stressful event and also these individuals probably experience more positive long term effects (Updergraff & Taylor, 2000).

1.4.2 Illness Related Variables

Illness related variables, which are the duration of illness, presence and number of previous hospitalizations, presence and number of other illnesses,

perceived disease severity will also be included as independent variables in the current study. Additionally some laboratory findings, which are ESR (the erythrocyte sedimentation rate), rheumatoid factor, and CRP (C-reactive protein) from medical files were also included. ESR is increased in 90% of the patients especially in the active phase of RA (Lipsky, 1991). Rheumatoid factors which are autoantibodies are found in more than two-thirds of RA patients (Lipsky, 1991). Several studies revealed that illness related variables are associated with psychological distress, especially depression and anxiety and are also related with posttraumatic growth (Abdel- Nasser et al., 1998; Cordova, Cunningham, Carlson, & Andryowski, 2001; Pastor Oliver, Morales Suarez-Varela, Llopis Gonzalez, & Ferriol Casar, 1998; Sharpe, Sensky, & Allard, 2001; Smedstad et al., 1996; Treharne, Kıtas, Lyons, & Bouth, 2005). Treharne et al. (2005) found that patients with established disease (RA duration >7 years) were significantly less depressed than those in the early stages of the disease. It was found that pain is directly related to decrease in self-esteem and worse psychological adjustment of RA patients (Nagyova et al. 2005). Nagyova et al. (2005) reported that experienced pain decreases the level of psychological well-being significantly, and the relationship between pain and psychological well-being (anxiety and depression) were mediated by self-esteem and adjustment to disease. Jakobsson and Hallberg (2002) found that pain and functional limitations decreased quality of life between RA and OA patients. COR theory also mentions the role of illness characteristics in psychological distress. Consistently, Lane and Hobfoll (1992) found that greater illness symptoms were related to greater feelings of anger in patients with severe chronic breathing disorder. These angry feelings leads to more angry behavior towards the supporters, then these angry behaviors in turn bring

about increased anger from supporters. As these findings suggest, COR theory emphasized that chronic physical illness depletes both personal and social resources. These resource losses lead to increased vulnerability, in turn, resulting in psychological distress.

Cardova et al. (2001) examined PTG in breast cancer (BC) patients and healthy controls. They found that two groups did not differ in depression or well-being, however, BC group had greater PTG especially in the three domains of PTG namely, relating to others, appreciation of life, and spiritual change. PTG of BC patients increased if they had higher perceived life-threat, more prior talking about breast cancer, higher income and longer time since diagnosis. In other words, this study revealed that socio-demographic and illness related factors are important factors in psychological distress of physically ill patients.

1.5 The Impact of Religiousness on Physical and Psychological Health

Religiousness has a significant impact on physical and psychological health. There are only a limited number of studies, which evaluated the relationship between being religious and mental and physical health.

Religiousness is likely to have an effect on the adjustment to life stress. Both primary and secondary appraisals might be influenced by religious beliefs. Individuals' religious views lead to different views about the same life event and they may also affect the perceived availability of coping options. Thus, religiousness may have a stress-buffering role by influencing the choice of specific coping

strategies (Park, Cohen, & Herb, 1990). Park et al. (1990) found that religious coping have a buffer role for high level of controllable negative events.

Controllability of the situation may have different functions. Although, self-directing religious coping is more helpful in controllable situations, collaborative religious coping is more helpful in uncontrollable situations (Bickel, et al. cited in Keefe, et al., 2001).

The effect of religious beliefs on coping has also been measured in patients with chronic illness (Gordon, et al., 2002). Gordon et al. (2002) studied 40 women with rheumatoid arthritis, osteoporosis, multiple sclerosis, systemic lupus erythematosus, or a combination of these disorders by a structured interview in order to understand the role of religious beliefs in their experiences and coping with their illness. They found that for the majority of women religious beliefs were important as a means of coping with their chronic illness. They also found that women who were successful in coping with their illness, reported that they have strong religious beliefs. Also women with stronger religious beliefs coped more successfully with their illness.

Kilpatric and McCullough (1999) stated that the effects of religiousness on physical health are inconsistent in different studies. They argued that the relationship between religiousness and health is mediated by psychosocial factors such as social support. Kilpatric and McCullough (1999) emphasized that religiousness is a resource and it helps in handling physical disability. They also reported that physically disabled people who are religious and spiritual have better physical well-being and less psychological disturbances. Powell, Shahabi & Thoresen (2003) reviewed the literature and they reported that religion is a protective resource against

cardiovascular disease. Additionally, religious participation (church/service attendance) was significantly related with mortality rate in older adults (Lutgendorf, Russell, Ullrich, Harris, & Wallace, 2004; Powell et al., 2003b)

Pressman, Lyons, Larson, & Strain (1990) reported that religiousness has a mediating role in ambulation status and depression for women with broken hips. Other researchers (Harris, et al., 1995) investigated the role of religiousness on the healing process of heart transplant patients during the one-year post surgery period. They found that those patients who reported having extremely powerful religious beliefs in their life had better physical functioning and less health worries and easily followed their regimen than other patients. Additionally, patients who reported praying frequently had followed their regimen more easily than other patients. Low level of anxiety is also found to be related with frequent use of religious services.

Smith, McCullough, and Poll (2003) in their meta-analysis, reported that religiousness is a variable which protects individuals from depression. The relationship between religious coping and depressive symptoms in HIV-infected African American women were mediated by active coping and self-efficacy (Woods, Antoni, Ironson, & Kling, 1999).

Prado et al., (2004) evaluated religious involvement, coping, social support, and psychological distress in HIV-seropositive African American mothers. They found that religious involvement was positively associated with active coping and negatively associated with avoidant coping. They also noted that religious involvement was positively related to social support. Finally, they reported that the relationship between religious involvement and psychological distress was mediated by general coping strategies. Religious beliefs also related to having better family

and social support, and bring about better psychosocial adjustment in gynecological cancer. In other words, researchers reported that having no religious beliefs is a risk factor for maladjustment in gynecological cancer patients (Chan et al., 2001).

Religion also might have some relationship to PTG. Openness to religious change has been suggested as a crucial element in the development of posttraumatic growth (Calhoun, Cann, Tedeschi, & McMillan, 2000). Although religious involvement is an important component of religiousness, Calhoun et al. (2000) reported that religious participation was not an independent predictor of PTG.

Several researchers mentioned two types of religiousness, which are intrinsic and extrinsic religiousness (Bergin, Masters, & Richards, 1987; Park et al., 1990). The religion was used by extrinsically motivated individuals to gain status, self-justification, security, and sociability. Religion is a means for these people. However, intrinsic individuals, although religion has external consequences, internalize beliefs and live by them. Religion seems as an end for intrinsic individuals. Bergin et al. (1987) also reported that intrinsic religiousness is negatively related with anxiety and positively related with self-control and better personality functioning. However, the opposite is true for extrinsic religiousness.

In a prospective study, which evaluated the effects of religiousness and depressive symptoms on recovery from heart surgery, it was reported that religiousness has both positive and negative effects (Contrado et al., 2004). In this study, researchers found that strong religious beliefs were related with fewer complications and shorter hospital stay. However, it was found that attendance to religious services of patients was not associated with complications but predicted longer hospitalizations. Additionally, they also found that religious beliefs and

attendance were stronger among women than men and a religious belief was not found to be associated with recovery. The researchers argued that these results might be related with the notion of intrinsic or extrinsic religious orientation. Because intrinsic orientation has positive health effects but extrinsic orientation has negative health effects.

Besides positive effects, Krause (2004) reported negative effects of religion on health. Krause noted four aspects of religion, which are church-based social support, religious coping, forgiveness, and prayer. Although, these facets provide positive effects on health, negative interaction in the church and religious doubt are found to be related with depression and less satisfaction with health.

The role of spirituality and religiousness was also examined in RA patients (Keefe et al., 2001). Thirty-five individual with RA kept a structured daily diary for 30 consecutive days in order to understand the role of daily spiritual experiences and daily religious/spiritual coping in individual pain experience due to RA. Patients in this study reported that they use positive religious and spiritual coping strategies much more frequently than negative religious and spiritual coping strategies. They also found that frequent daily spiritual experiences related with higher levels of positive mood, and lower levels of daily negative mood. Another finding of this study is the relationship between daily salience of religion in coping and daily perception of social support. It was found that patients who use religion in their daily coping with pain reported much higher levels of instrumental, emotional, arthritis-related, and general social support. The other and important finding of this study is that although frequency of spiritual experiences and coping efforts were not related to pain, coping efficacy was significantly related to pain. Coping efficacy was also

related to mood and social support. Individuals experiencing high coping efficacy reported much less negative mood, and were much likely to have positive mood and higher levels of emotional support and general social support. They concluded that coping with a chronically painful medical condition, i.e. Rheumatoid Arthritis might sensitize one or improve spiritual or religious beliefs.

Many studies revealed that religiousness has a strong influence on coping with chronic illness. Although religion may have considerable importance for many Turkish people, its effect on adjustment to chronic physical illness has not been studied yet. Patients may use religiousness as coping resources and may attribute the causes of their illness to God, which may in turn affect their adjustment. Religiousness also has a role in COR theory. According to COR theory, there are 74 key resources and one of them is 'involvement with church, synagogue etc' (Hobfoll, Ennis, & Kay, 2000). In the present study, religiousness was examined to understand how it affects patients' psychological adjustment. Although religiousness is a complex and multidimensional construct, in the present study only the behavioral aspect of religiousness and individuals' perception about himself/herself as a religious person was examined as a psychosocial resource.

1.6 Perceived Social Support

A huge amount of literature focused on the relationship between social support and emotional disorders in chronic disease (Abraido-Lanza, 2004; Bisschop, Kriegsman, Beekman, & Deeg, 2004; Fitzpatrick, Newman, Lamb, & Shipley, 1988; Holahan, Moos, Holahan, & Brennan, 1995; Taal et al., 1993). The beneficial role of

social support on psychological and physical well-being of patients who have different types of diseases has been demonstrated in many studies (Bisschop et al., 2004; Nielsen, 2003; Pennix et al., 1997; Reynolds & Perrin, 2004; Taal et al., 1993).

Chronic illness is a stressor, which disturbs the individuals' life (Thoits, 1986). According to Thoits (1986), social support works as a coping assistance which helps to change the problematic condition or regulate the anxious or depressive feelings.

Social support may have two broad forms, which are received support or perceived support. Cropley and Steptoe (2005) proposed about two types of classification of social support, which are structural support (quantitative facets of support such as network size) or functional support (qualitative facets of support such as "interpersonal relationship, that is, the degree to which one believes that help is available").

According to Cohen and Wills (1985), perceived social support has a moderator role between stress and psychological well-being. They also noted that there are four types of social support, which are emotional support, informational support, social companionship and instrumental support. These types of support contribute to health.

Other types of social support, which is social constraints (the perception of network members as unreceptive to hearing about individual's experience), was also found as a crucial factor on adaptation to a chronic illness. Dannof-Burg, Revenson, Trudeau, & Paget (2004) in their one-year longitudinal study investigated unmitigated communion (focus on other and exclusion of self), social constraints and

psychological distress among 399 women with rheumatoid arthritis. They reported that social constraints had moderating effects on the relation between unmitigated communion and psychological distress. They reported that low social constraints had a buffer role for being high in unmitigated communion. Women high in both unmitigated communion and social constraints experienced the highest level of psychological distress. Women with high levels of unmitigated communion but having low social constraints experienced lower levels of psychological distress. The results of this study revealed that perceived social relationships have a protective role in psychological distress.

There are two hypotheses in testing the role of different types of support. These are the main effect (direct effect hypothesis) and buffering or moderating hypothesis (Cohen & Wills, 1985). Most of the available literature tested former or latter hypothesis and found support for both. One of these studies is a prospective study of Cropley and Steptoe (2005) that examined social support, life events and physical symptoms in men and women who faced chronic and recent life stress. Their research did not support the main effect hypothesis, however, the stress-buffering hypothesis was supported. That is, they did not find general beneficial effect of social support on health. They found a moderating effect of social support for individuals who reported recent high stress. The negative effects of stress in low or high chronic stress group were not moderated by social support. Physical symptoms of chronically high stressed individuals were high in two conditions whether they had high or low levels of support.

Consistent with Cropley and Steptoe (2005) study, Barefoot et al. (2000) study also supported stress-buffering hypothesis in cardiac patients. They examined

moderators of the effects of social support, depression, quality of life, and personality before discharge and again after a month during home visits. They found that depression scores of cardiac patients in home visit who reported relatively high levels of social support while in hospital were lower. The positive impact of social support was found in those severely depressed, the younger, and those of lower income.

From the COR perspective, social support is seen as a construct contributing to the maintenance of robust resource reservoir. COR proposes that social support provides a main route to achieve personal goals and meet environmental demands by expanding resources available to individuals (Hobfoll, Lilly, & Jackson, 1992).

Social support also has a positive effect on the psychological adjustment of RA patients (Fitzpatrick et al., 1988; Fizpatrick, Newman, Archer, & Shipley, 1991; Penix et al., 1997). Penninx et al. (1997) evaluated 1690 older individuals in order to evaluate the direct and buffering effects of social support and personal coping resources in individuals with arthritis. They found the buffering function of social support. Receiving emotional support protected from depression. In another study, examining the effect of social support and coping resources on depressive symptoms including 2,810 people, Penninx et al. (1998) found that emotional support was related with less depressive symptoms in arthritis and cardiac patients. However, receiving instrumental support was associated with more depressive symptoms especially in diabetes patients. This study also supports buffering effect of social support and underlines that the type of support also makes a difference.

Abraido-Lanza (2004) also investigated social support and psychological adjustment of arthritis patients. He found that tangible housework support was a

significant predictor of less psychological disturbance. However, emotional support was a significant predictor of greater psychological disturbance. He also noted that the relation between social support and adjustment was not mediated by either self-esteem or self-efficacy.

The source of the social support also seems to be an important factor. According to Cohen and Wills (1985), taking higher levels of social support from significant people provide better health under stressful situation. Therefore, these people experience less anxiety and depression. Kraaimat, et al. (1995) investigated depression, anxiety and social support in rheumatoid arthritic women with and without spouses. They found that patients who are widowed or divorced, who had a lower income, and who had less social support were more depressed and anxious than patients who were never married and then those living with a spouse. This finding showed the significance of loss of existing social support. Kraaimat et al. (1995) also found that for both male and female RA patients, more psychological distress was related with criticism of spouse and low level of social support from friends. For males, criticism of spouse was related with anxiety. However for females, criticism of spouse was associated with both anxiety and depression.

Compliance with the diet and prescribed medication is very important for the well being of physically ill patients. Social support may be also related to compliance behavior. Rosenberger et al., (2005) interviewed 161 adult kidney transplant recipients to examine self-rated health, social support, education, stress from adverse effects and compliance with the immunosuppression. Noncompliant patients reported worse self-rated health, less satisfaction with social support and higher stress from adverse effects.

The effects of social support on health are associated with different variables. Income is a moderator variable between the relationship of social support with health. Vitaliano et al. (2001) investigated the salutogenic effects of social support for lower and higher income older adults, half of whom were spouse caregivers of people with Alzheimer's disease and half of them were spouses of no demented controls. To evaluate the salutogenic effects of social support on health they used physiological measures that were blood pressure (BP), high-density lipoprotein cholesterol (HDLC) and natural killer cell (cytotoxic) activity measured in two different times (5 years interval). They found that the emotional support at T1 was related to better change in physiological measures in the lowest income group. However, the relationship between emotional support and positive physiological change was not significant for middle and high-income group. They also found that there was an interaction between tangible support and income. This result was inconsistent with the literature that shows that lower income people might be more dependent on tangible support due to less means to purchase aid with life's necessities. It was accepted as the evidence for 'added value hypothesis by researchers. They noted that emotional support provide added value for lower income people, since negative stressful events might have more emotional effects for lower income groups.

The severity of RA is a crucial construct, which leads to vary the levels of social support. Le Gallez (1993) interviewed 22 RA patients. She reported that families with a severely disabled RA patient coped better than families with less severely disabled RA patients. She investigated the reason for this result. It was found that when the patient had severe deformity in the joints, high level of disability

and pain, the patient received high levels of sympathy and support from the partner. However, if the disease progression varies from time to time, including acute inflammation and pain in joints and then a remission period, the leads to ambiguity about the partners' disease and causes difficulty in providing sympathy to the ill partner. The findings of Le Gallez' study revealed that the provision of support is related to partner's knowledge about RA.

The COR theory posits that there are 74 key resources and also these resources divide in four categories which are object resources, personal characteristics and skills, condition resources, and energy resources. Condition resources are also called social resources. Condition resources (social resources) are 'feeling valuable to others, intimacy with one or more family members, intimacy with spouse or partner, intimacy with at least one friend, receiving understanding from his/her employer/boss, companionship, affection from others, and loyalty of friends (Hobfoll, Ennis, & Kay, 2000). According to the COR theory, social resources (social support) play a significant role in psychological distress. Therefore, the effects of perceived social support level of RA patients on psychological distress and PTG was examined.

1.7 Ways of Coping

All individuals experience stress and try to cope with it. Lazarus (1991) defined coping as an appraisal process that helps to manage the discrepancy between personal resources and demands of situation. Lazarus and Folkman (1984) proposed

three types of appraisal, which are primary appraisal, secondary appraisal, and reappraisal.

Lazarus and Folkman (1984) defined primary appraisal as the appraisal of the environment, for deciding on whether or not there is a threatening event for the individual. Secondary appraisal is defined as the evaluation of what can be done to handle the threatening situation. Therefore, secondary appraisal is the evaluation of coping options, which exists in the threatening situation. Finally, Lazarus and Folkman (1984) defined reappraisal as the evaluation of new information from internal or external resources and making alterations in earlier appraisals.

According to Lazarus and Folkman (1984) psychological stress results from the evaluations of personal resources as inadequate to cope with threatening environmental surroundings. They also proposed that coping is another essential aspect of stress.

Folkman and Lazarus (1988) proposed eight forms of coping which are confrontive coping, distancing, self control, seeking social support, accepting responsibility, escape/avoidance, painful problem solving and positive reappraisal. Broadly, these different ways of coping serve as problem or emotion focused coping functions.

Lazarus (1991) reported that there are two kinds of coping. These are problem-focused coping and emotion-focused coping. Problem-focused coping includes changing the actual relationship between the person and the situation. Emotion focused coping includes changing emotions without attending to problems directly.

Similarly, Endler and Parker (1990) proposed three main forms of coping which are task-oriented, emotion- oriented and avoidance-oriented.

According to Hobfoll et al. (1996) coping is a multi-axial process and there are three dimensions of coping, which are directness (direct-indirect; the degree to which individuals approach coping by directly focusing on the problem or the people who are involved in the problem, versus the extent to which they approach the problem or people involved in the course of problem, through the manipulation of the environment or the perception of people involved), sociability (prosocial-antisocial; the approach towards others that one taken in coping with stressors) and activity (passive-active; the level of activity expressed directly or indirectly in coping with any stressors). Accordingly, they measured nine coping strategies. This approach not only focused on individual effects of coping but also focussed on the crossover effects of coping strategies from the individual to other people. In other words, coping takes the welfare of other people in the environment into account. Prosocial-antisocial dimension of multi-axial coping consider the social impact of coping. Prosocial coping is using of social resources to deal with stressors. However, antisocial coping meet the individual coper's personal needs, it may be harmful to other people in the environment. Generally, prosocial coping behaviors were found to be related to better psychological functioning (Monnier, Cameron, Hobfoll, & Gribble, 2000). Monnier et al. (2000) examined direct and crossover effects of prosocial and antisocial coping behaviors of fire-emergency workers (FEWs). They found that usage of antisocial coping by FEWs leads to higher levels of depression. However, the use of prosocial coping leads to lower levels of anger expression and increased relationship adjustment. They supported the hypothesis that prosocial and

antisocial coping has direct and crossover effects and they have differential effects on well-being.

Traumatic experiences, such as RA disease, bring about various changes in life (e.g., work, social relationship, personal hygiene, leisure) and the patient needs to adjust to their new situation. Smith and Wallston (1996) distinguished four types of coping in rheumatoid arthritis patients, which are active, passive, minimal and self-blaming.

The relationships between coping strategies and adjustment to RA have been identified as an important factor in a study with elderly RA patients. Downe-Wamboldt and Melanson (1998) tested Lazarus and Folkman's theory of stress and coping. It was concluded that there was a consistent relationship between severities of impairment, emotions, coping strategies and psychological well-being at both time one and time two (one year later). It was found that optimistic and self-reliant coping strategies were used most often and evasive and emotive strategies were used the least at both time periods. Emotions influenced choice of coping strategies and psychological well-being. Downe-Wamboldt and Melanson (1998) found that there was a direct relationship between higher social economic status and greater use of confronting coping strategies and there was direct relationship between lower social economic status and evasive coping strategies (passive type of coping). In other words, patients with higher social economics status greatly used confrontive coping strategies and they used evasive coping strategies less. Social economic status indirectly influenced psychological well-being by evasive coping. Four emotions harm, challenge, threat and benefit were included as stress emotions in this study. It was found that harm had a direct influence on greater use of evasive coping

strategies and less psychological well-being. The stress emotions of threat directly influenced greater use of confrontive, emotive, and supporting coping strategies. Higher challenge emotion scores were directly related with an increased use of optimistic coping strategies and psychological well-being. The stress emotion of benefit directly associated with psychological well-being. In addition, evasive coping strategies directly and negatively influenced psychological well-being. The results of this study revealed that the appraisal of the situation determines the type of coping strategies. Perceiving the disease as harmful leads to the use of more passive coping strategies.

Coping behaviors have been examined to understand its strength as a resources from COR theory perspective. (Hobfoll, Dunahoo, & Monnier, 1995). According to COR theory there are robust and weak resources. Coping behaviors are accepted as only weak resources, which have strongest beneficial effect under low-stress situations. However, coping has little effect under higher-stress situations. In sum, COR theory noted that coping is only weakly related to psychological outcomes. In order to evaluate weak-versus-strong resource prediction for coping of COR theory, coping strategies of RA patients were examined in the present study.

1.8 Coping Self-Efficacy (CSE)

Self-efficacy is one of the person factors included in the current study. The role of coping self-efficacy within the framework of social cognitive theory will be evaluated to understand how it effects adjustment of RA patients.

Bandura (1986) defined self-efficacy as it is not a matter of knowing what to do in dealing with ones's environment, but also self efficacy is a generative capability which includes organization of cognitive, social, and behavioral subskills to serve several purpose. According to Bandura (1986):

> '*self-efficacy is a characteristic of the individual, which has an important role in ones' everyday life* (p. 390). *Individuals' emotional reactions and behaviors are influenced by perceived self-efficacy* (p. 439).

Additionally, *perceived self-efficacy is an important variable for psychological functioning* (p. 125). From COR perspective self efficacy, like social support, has a contribution to the maintenance of strong resource reservoirs.

Self-efficacy has a key role in stress reactions and determines how well people cope with stress. People who have high coping self-efficacy choose appropriate coping strategies and consequently the traumatic process may turn into a benign one (Benight & Bandura, 2004).

Self-efficacy has a significant impact on psychological functioning (Bandura, 1986, p. 425). Self-efficacy has been shown to influence depression, anxiety and posttraumatic growth of patients (Barlow, Cullen, & Rowe, 2002; Penninx et al., 1998; Graves, 2003). Penninx et al. (1998) examined the effects of social support and personal coping resources on depressive symptoms in patients with five different types of chronic disease, which were diabetes mellitus, chronic obstructive lung disease, cardiac disease, arthritis of knee or hip, or cancer and healthy individuals. They found that personal coping resources such as high self esteem, high sense of mastery, and high self-efficacy were related with less depression in both healthy people and among people with chronic disease.

Self-efficacy is also an important factor for psychological interventions. A recent meta-analysis examined the effects of interventions including a greater number of components related to social-cognitive theory for quality of life of cancer patients in 38 randomized-control studies (Graves, 2003). Studies included in this meta-analysis provided intervention techniques that were described by Bandura (1986) as methods for improving self-efficacy, outcome expectations and self-regulation. Components of these interventions were relaxation training, coping (physical, affect, spiritual), practice new skills in or outside the intervention, role playing, observation of behavior of others (modeling of behavior), cognitive restructuring, self-monitoring of skills, thoughts, and so on, goal setting, helping to set realistic expectations, cancer survivor testimony, self help materials (bibliotherapy), and problem solving. It was found that the inclusion of social cognitive therapy based components have increased quality of life of cancer patients. Perceived self-efficacy has a mediator role through cognitive mechanisms and it reduces psychophysiological arousal (Bandura, 1986, p. 442).

Psychological interventions, which include self-efficacy as a component, are also benefical treatments for RA patients. Hammond and Freeman (2004) examined the effects of two treatments, which are a standard arthritis education programme (8 hours) and educational-behavioral joint protection programme (8 hours) in two rheumatology outpatient departments in UK. The standard programme included talks related to RA, drug treatments, diet, exercise, pain management, relaxation and joint protection. However, the joint protection programme included application of educational, behavioral, motor learning and self-efficacy enhancing strategies to increase adherence. They found that the educational-behavioral joint protection

proggramme is more effective than standard training in improving joint protection adherence and maintains functional ability in the long term.

Domain specific self-efficacy rather than generalized self-efficacy is a stronger predictor of outcome (Salovey, Rothman, & Rodin, 1998). Benight & Harper (2002) defined coping self efficacy (CSE) as individuals' appraisal of whether one is capable of managing the threatening condition. CSE determines alertness response to threat, dealing with emotions and coping behaviors. They also reported that recovery after the trauma is related with trauma related self-efficacy.

CSE leads to more benign evaluations of threat, feeling less stress, less rumination related with threat, better behavioral responses to threat and faster recovery from distressing event. CSE facilitates psychosocial functioning (Benight & Bandura, 2004).

Benight and Bandura (2004) evaluated different types of trauma, such as military traumatization, natural disasters, terrorist attacks, interpersonal traumatization and spousal bereavement. They reported that CSE was a mediator between these traumatic events and posttraumatic recovery. CSE has a buffer role against development of posttraumatic stress after destructive hurricane.

Several researchers examined the mediator role of self-efficacy. Benight, et al. (1999b) study is one of them. They reported that CSE is a mediator between three variables, namely, resource loss, social support, and optimism and psychological distress. They also found that when the effects of CSE was removed, neither optimism nor social support have an effect on PTSD symptoms.

Several recent studies among RA patients suggest that self-efficacy is an important variable for psychological and physical well-being. For example, Barlow

et al. (2002) found that self-efficacy was correlated with both physical and psychological health. Brekke, Hjortdahl, & Kvien (2001) examined 815 RA patients over 2 years period. In this study, self-efficacy of RA patients was measured with a domain specific scale, which is 'The Arthritis Self efficacy Scale'. They found that there is a significant correlation between self-efficacy and health status change over a 2-year span. RA patients with high self-efficacy revealed favorable changes in health status. Similar findings were also found in Barlow et al.'s (2002) study. Both the physical and the psychological health status of RA patients were found to be correlated with arthritis self efficacy. High self-efficacy was related with less physical impairment, less pain, less fatigue, less depressed and anxious mood and more acceptance of the illness condition. Although, they did not examine the mediator role of self-efficacy, their partial correlations revealed that self-efficacy might mediate the relationship between physical health and psychological well-being.

Although, personal coping resources such as self-efficacy has important effects on psychological adjustment to chronic disease, the results of different studies are inconsistent. Bisschop et al. (2004) evaluated people who have different chronic diseases, such as cardiac disease, peripheral arteriosclerosis, stroke, diabetes mellitus, CNSLD (asthma, chronic bronchitis or pulmonary emphysema), cancer, arthritis (RA and OA). They found that self-efficacy does not have a moderator role between effects of disease and depression in chronic disease conditions, except for cancer.

In the present study the effects of CSE (i.e. arthritis self efficacy) as a resource on psychological distress and posttraumatic growth of RA patients will be examined.

1.9 Aim of the Study

The general aim of the present study was to examine adjustment to RA. Specifically, the negative effects such as depression and anxiety and the positive effects such as PTG that may result from struggling to cope with RA will be examined in a sample of RA patients.

Having a chronic disease like RA is likely to lead to resource loss, resulting in a number of psychological and physical problems for the patients. On the other hand, it may also lead to resource gain, such as an increase in social support. Self-efficacy and religiousness can be important resources that may enhance coping and adjustment. Level of resource loss, ways of coping, religiousness, perceived social support and arthritis self-efficacy (ASES) will be evaluated in order to determine the relationship between these resources and psychological distress and PTG. Psychological distress will be measured in terms of anxiety and depressive symptoms. Positive effects will be examined as posttraumatic growth.

In sum, the aim of the present study is to investigate how well personal resources (religiousness, coping strategies, arthritis self efficacy, resource loss) and social resources (perceived social support) explain the variance in PTG and psychological distress.

The following hypotheses will be tested:

1. Some-sociodemographic characteristics such as gender, age, education, income and marital status will predict PTG and psychological distress. Specifically, being females, younger, having higher education, and income and being married expected to be related to higher PTG and lower psychological distress.
2. Illness related variables such as fatique, acuteness of disease, impact of illness on daily activities, perceived disease severity will be related to higher levels of PTG and psychological distress.
3. Resources such as religiousness, perceived social support and ways of coping and arthritis self-efficacy will be related to higher PTG and lower psychological distress (anxiety and depression).

   3.1 Patients with higher resource loss are expected to have higher PTG and higher psychological distress (anxiety and depression).

   3.2 Patients with higher levels of social support are expected to have higher PTG and lower psychological distress (anxiety and depression).

   3.3 Patients with higher levels of religiousness are expected to have higher PTG and lower psychological distress (anxiety and depression).

   3.4 The use of problem-focused coping is expected to relate to higher levels of PTG and lower psychological distress (anxiety and depression).

   3.5 Patients with higher levels of arthritis self efficacy are expected to have higher PTG and lower psychological distress (anxiety and depression).

CHAPTER II

METHOD

2.1 Overview

The main study was conducted after a pilot study aiming to test the psychometric properties of the Arthritis Self Efficacy and Resource Loss Scale and the development of some of the questionnaires (see Appendix A for the details of the pilot study). The purpose of the main study was to investigate the hypotheses related to the variables affecting psychological distress and PTG of Turkish RA patients.

2.2 Participants

The sample consisted of 117 Rheumatoid arthritis patients attending both Rheumatology (21 in patients) and Physical Medicine and Rehabilitation Clinics (26 in patients and 70 outpatients) of Ankara Numune Education and Research Hospital. The sample consisted of 99 women and 18 men. Patients' ages ranged between 20 to 75, with a mean of 48.50 (SD = 13.17). Some sociodemographic characteristics, and medical history variables of the sample are presented in Table 2.

Table 2. *Characteristics of the main study sample*

Variables	Number (Percentages)	Mean	SD	Range
Gender				
Female	99			
Male	18			
Marital status				
Single	9 (7.69)			
Married	89 (76.07)			
Divorced	3 (2.56)			
Widow/widower	16 (13.68)			
Education (in years)		4.62	3.73	0-15
Having children				
Yes	103 (88.03)			1-9
No	14 (11.97)			
Employment				
Unemployed	106 (90.60)			
Employed	11 (9.40)			
Monthly income				
Less than 500 YTL	71 (60.68)			
500-1000 YTL	36 (30.77)			
1000-2000 YTL	6 (5.13)			
2000 YTL and above	4 (3.42)			
Living place				
Big cities	74 (63.25)			
Cities	19 (16.24)			
Towns	11 (9.40)			
Villages	13 (11.11)			
Number of household members		3.77	1.90	1-12
Living with family	108 (92. 31)			

2.3 Instruments

The research consisted of a Demographic and Illness Related Information Form and seven self-report questionnaires, namely, Resource Loss Scale (RLS), Religiousness Scale (RS), The Arthritis Self-Efficacy Scale (ASES), Hospital Anxiety and Depression Scale (HADS), Multidimensional Scale of Perceived Social Support (MSPSS), Ways of Coping Inventory (WCI), and Posttraumatic Growth Inventory (PGI) (See appendix B, for the whole information on each instruments of these are presented below).

2.3.1 Demographic and Illness Related Information Form

This form was prepared by the investigator to tap information on socio-demographic characteristics and illness related variables. The sociodemographic part included: age, gender, education level, income, marital status, number of children, work status and residence. The medical history and illness related information part included: the duration of illness, presence and number of previous hospitalizations, and presence and number of operations due to RA, presence and number number of other illnesses, pain & fatigue levels, acuteness of disease, the impact of illness on daily activites, perceived disease severity, ESR (the erythrocyte sedimentation rate), CRP (C-reactive protein), and rheumatoid factor.

Pain and fatigue levels were measured by using 10mm Visual Analog Scales. Acuteness of disease and the impact of illness on daily activities were each measured by one question. Perceived severity of disease was measured with the pain subscale

of the Arthritis Impact Measurement Scale 2 (AIMS2) (Meenan, Mason, Anderson, Guccione, & Kazis, 1992). Four questions on the frequency of the pain and joint stiffness during the last month, rated on a 5-point Likert scale ranging from all days to no days were also included. Higher scores reflecting grater levels of discomfort.

In order to examine the thoughts of RA patients related to the future of their disease, an open-ended question 'What do you think will happen in relation to the progress of your illness in the fortcoming five or ten years?' was included.

2.3.2 Resource Loss Scale (RLS)

Conservation of Resources-Evaluation (COR-E) is a self-report instrument, consisting of two subscales, assessing loss and gain of resources within four categories. These categories are objects, conditions, personal characteristics, and energies. The scale has 74 items. Subjects rate the amount of loss during the illness (1=little loss to 5= great loss) and the amount of gain during the illness (1=little gain to 5= great gain) for each resource item. The COR-E scale was developed by Hobfoll and colleagues to measure resource loss and gain (Hobfoll, Lilly, & Jackson, 1992 cited in Freedy & Hobfoll, 1994). The results of different studies revealed that the psychometric properties of the COR-E scale was satisfactory. In their study, Freedy and Hobfoll (1994) designed a program to reduce stress among nurses by increasing their coping resources. In the study, they selected 17 items related to social support resources and 19 items to measure mastery resources. They found the internal consistency for support resource loss as .85; support resource gain as .91; mastery resource loss as .91, and mastery resource gain as .93.

For the present study, some suitable items from the four subscales of COR-E scale was reviewed and adapted for RA patients. In additon, semi-structured interviews with seven RA patients and two relatives were also conducted (see appendix A for detailed information about interview results). Subsequently, the Resource Loss Scale (RLS) was constructed for the present study. In order to evaluate the psychometric properties of the 23 item RLS in Turkish RA patients, it was administered to 49 RA patients before initiating the main study (see appendix A). Patients were asked to rate the amount of loss for each item during the last year (1= no loss, 5= great loss). The RSL had one item from work resources, three items from self-esteem, three items from mastery, two items from well-being, two items from material scale, two items from energy scale, four items from family scale, and four items from general resources scale of COR-E scale. In addition, one item that is related with religiousness, which is, 'I have lost my energy to engage in the demands of my religion and one item related to sexual relationship were added (see Appendix B for RLS).

2.3.3 Religiousness Scale (RS)

Religiousness Scale (RS) was used to assess religious resources (Yaparel, 1996). The RS scale consists of 31 items. Each item is rated on a 5-point scale ranging from "completely wrong" to "completely true". Yaparel (1996) reported that RS has four subscales, which are religious beliefs, religious feelings, religious behavior, and religious knowledge. Only the 10 items religious behavior subscale was used in the current study due to not giving much burden to the patients. In

addition, one item which is 'I believed that I am a religious person' was added. In the pilot and main study this 11 items religious scale was administered. In the main study, in the final analyses the 10-items religious behavior subscale was used due to the high correlation between the 10 items and the 11th item that was added.

2.3.4 The Arthritis Self-Efficacy Scale (ASES)

Lorig, Chastain, Ung, Shoor, & Holman (1989) developed the ASES in order to measure self-efficacy in RA patients. The scale has 20 items which can be grouped into three subscales, which are self-efficacy pain scale, self-efficacy function scale, and self-efficacy other symptoms scale. Ratings of ASES are on a 10-point scale (1= very uncertain, to 10= very certain).

Before the pilot study, the researcher and two graduate psychology students independently translated ASES into Turkish. The researcher examined these three translations and chose the best translation for the Turkish ASES. Following this, a bilingual person back translated the ASES into English and accordingly the final version of the Turkish ASES was formed. Before the pilot study, the response format was also modified due to possible difficulties in comprehension, from ten points to five points (1 = very uncertain, 5 = very certain). (See Appendix B for ASES).

2.3.5 Multidimensional Scale of Perceived Social Support

Zimet, Dahlen, Zimet, and Forley (1988) developed the Multidimensional Scale of Perceived Social Support (MSPSS). MSPSS has 12 items that assess

perceived adequacy of social support from three different sources, namely support from the friends (items 3, 4, 8, 12), from family (items 1, 2, 7, 10), and from a significant other (items 5, 6, 9, 11). Subjects rated perceived social support on a 7-point scale (1= very strongly disagree, to 7= very strongly agree).

The psychometric property of the MSPSS was assessed in a sample of 275 university students (Zimet et al., 1988). The internal consistency of the total scale was found to be .88. The reliability coefficient was .91 for significant other scale, .87 for family scale and .85 for friend scale. Test retest reliabilities of the significant other, family and friend subscales were reported as .72, .85, and .75 respectively over a two to three months period.

The validity studies of MSPSS revealed that, it has negative correlations with depression levels of university students (Kzarian & McCabe, 1991; Zimet et al., 1988) and adolescent psychiatric inpatients (Kazarian & McCabe, 1991). MSPSS correlated positively with self-concept and socially supportive behaviors. MSPSS has been adapted into Turkish by Eker and Arkar (1995). The psychometric properties of the Turkish version of the scale were examined in university students with psychological problems, psychiatric inpatients and outpatients, kidney disease patients, and normal controls. The Cronbach alphas were high, ranging between .85 and .91. In addition, good internal consistency for the total scale and subscales in all samples were shown. In terms of the validity the MSPSS demonstrated significant negative correlations with STAI in the three samples, namely students, renal disease patients and normals. MSPSS was significantly correlated with depression scores of university students. The results revealed that MSPSS has good construct validity in Turkish samples (See Appendix B for MSPSS).

In the present study, a total mean perceived social support score was obtained simply by summing up the responses to the items of MSPSS and dividing them by the numbers of items. (M= 5.12, SD= 1.42, Min= 1, Max= 7, Range = 6). In addition the sum of the MSPSS was also obtained which was 61.39. The overall Cronbach alpha reliability of the scale was found to be .89 for the current sample. When it was considered that 7 is the maximum possible score that can be obtained from the MSPSS, a mean score of 5.12 showed that the sample on the average, perceived relatively high levels of social support. When, we compare this finding with the results of other studies with Turkish samples, RA patients' experienced lower perceived social support than breast cancer patients (M= 73.19) (Kesimci, 2003) and emergency surgery patients (M= 67.87) (Karanci & Dirik, 2001). However, RA patients experienced higher level of perceived social support than parents of autistic children (Mother M= 56.6, Father M= 58.8) (Elçi, 2005).

2.3.6 Ways of Coping Inventory (WCI)

Folkman and Lazarus (1985) developed and later revised Ways of Coping Inventory. The revised version of WCI had 66 items taping cognitive and behavioral strategies people use in stressful circumstances. Ratings of WCI are on a 4-point scale (0 = not used, 4 = used a great deal).

Folkman and Lazarus (1985) reported that WCI has eight subscales. One of the subscales is problem-focussed coping. Six of them reflect emotion focussed coping, that are wishful thinking, distancing, emphasizing positive, self-blame,

tension reduction and self-isolation. The last subscale is seeking social support that serves as both problem and emotion-focussed coping.

Siva (cited in Uçman, 1990) evaluated the psychometric properties of the WCI. Siva added eight new items and used WCI as a 74 items scale. Siva reported that the internal consistency of the whole WCI was high (.91).

Karanci, Alkan, Akşit and Sucuoğlu (1999) used WCI in research with earthquake survivors. They made some minor modification and they formed a 61 items WCI based on their preliminary study. Karanci et al. (1999) changed the instructions of WCI and asked participants to rate coping as a general way of approaching events. After the preliminary study, due to difficulties in comprehensibility, they changed the response format from four points to three points (1 = never, 2 = sometimes, 3 = always). In the current study, a 42 items form of WCI, developed and used by Kesimci (2003) by taking items loading above .40 in Karanci et al.'s (1999) study was used (See Appendix B for WCI).

In the present study, the results of the factor analyses of Kesimci (2003) study, conducted with a sample of cancer patients were used. Kesimci (2003) obtained four factors explaining 47.2 percent of variance in her study. Kesimci reported that a factor loading of .35 was taken as the criterion in deciding the item composition of the four factors and four items were excluded from further analysis due to not meeting the criterion. So, thirty-eight items were included under four factors. Accordingly, for the present sample, four mean factor scores were obtained simply by summing up the responses to the items that belong to the factors and dividing them by the number of items in each factor. Thus, the first factor was "fatalistic coping" including items 37, 34, 16, 10, 15, 9, 24, 30,20, 14, 1, 29, 33, 2

(Cronbach alpha for the present study was .80). The second factor was "optimistic/seeking social support" including items 23, 3, 7, 8, 42, 6, 27, 21, 4 (Cronbach alpha for the present study was .73). The third factor was "problem solving coping" including items 19, 22, 38, 41, 28, 31, 39, 5, 25 (Cronbach alpha for the present study was .83). The fourth factor was "helplessness coping" including items 36, 35, 40, 26, 12, 17 (Cronbach alpha for the present sample was .77).

The overall alpha reliability of the scale was .88

2.3.7 Posttraumatic Growth Inventory (PTGI)

PTGI was used to assess positive changes, which may perceived by the patients as a result of their illness. PTGI was developed by Tedeschi and Calhoun (1996). "PTGI" consists of 21 items, grouped into five subscales. The items reflect new possibilities, relating to others, personal strength, spiritual change and appreciation of life. Ratings are made on 6-point scales 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). The reliability study of the scale was examined in a sample of university students (Tedeschi & Calhoun, 1996). Tedeschi and Calhoun (1996) reported that PTGI has acceptable construct validity, internal consistency coefficient (.90) and test-retest reliability over a 2 month interval (.71).

PTGI was translated into Turkish by Kılıç (2005). Although, the original PTGI used 6-point scales, in his translation Kılıç used 5-point scale with a different wording as compared to the original and he also used 4-factor solution. Before the pilot study, the present researcher also translated PTGI into Turkish and compared it

with Kılıç's translation. Minor modifications were made in wording and the response format of the current translation retained the 6-points format of the original scale. For RA patients, the response options were modified to refer to rheumatoid arthritis rather than crisis, as used in the original version (See Appendix B for PTGI).

2.3.8 Hospital Anxiety and Depression Scale (HADS)

Zigmond and Snaith (1983) developed the Hospital Anxiety and Depression Scale to assess anxiety and depressive symptoms in nonpsychiatric patients. The scale has 14 items (seven for symptoms of anxiety and seven for symptoms of depression). Ratings of HADS are on a 4-point scale. The cut off scores for possible anxiety and depression is a score of 8 or more and the diagnosis of probable anxiety and depression is a score of 10 or more on the anxiety and depression subscales. Higher scores indicating greater anxiety and greater depression.

Zigmond and Snaith (1983) evaluated HADS in a sample of patients with different physical illnesses. The evaluation of the psychometric properties revealed satisfactory results. Internal consistency of anxiety items ranged from .76 to .41, the correlations ranged from .60 to .30 for depression items.

Psychometric properties of the HADS in Turkish samples were evaluated by Aydemir (1997). Two hundred thirteen university students and 136 medically ill patients were included in the study. In the student sample the mean of depression was 5.32 (SD = 3.26) and Cronbach alpha was .70. Mean anxiety for students was 8.13 (SD = 3.41), Cronbach alpha was .74. In the patient sample the mean of depression was 8.04 (SD= 4.76), Cronbach alpha of scale was .78. The mean of

anxiety was 9.35 (SD= 5.20); Cronbach alpha of scale was .85. (See Appendix B for HADS).

As stated above, the HADS consists of both depression and anxiety items. Depression items are 2, 4, 6, 8, 10, 12, and 14. Anxiety items are 1, 3, 5, 7, 9, 11, and 13. Items 2, 4, 7, 9, 12, and 14 scored as a= 0, b= 1, c= 2, d= 3; whereas items 1, 3, 5, 6, 8, 10, 11 and 13 have reverse coding as a= 3, b= 2, c= 1, d= 0.

2.4 Procedure

The instruments were administered to patients receiving treatment from the Ankara Numune Hospital at different days of the week during a six months period. The research instrument was administered to both out and in-patients. Instruments were administered to outpatients while they were waiting for routine monthly physical examination. For in-patients, instruments were administered at suitable times for the patients, during days or nights. Before administration approval from hospitals were received. The investigator identified RA patients by obtaining information from medical files. Then, the investigator introduced herself as a graduate psychology student and informed the patient that she was interested in gaining an understanding of the effects of being a RA patient. Then, the investigator informed the patient about the aim and the procedures of the study and informed consent was obtained from patients. Participation was on a voluntary basis. After having informed consent, the investigator administered the Socio-Demographic and Illness Related Information Form and seven self report questionnaires individually on one occasion. Questionnaires were given in a random order, in order to prevent an

order effect, for each patient. The investigator gave the necessary instructions for each scale and then read the items and recorded the responses herself. It took approximately thirty to forty minutes to complete the instruments. Data was collected in June-November, 2005.

2.5 Statistical Analysis

Statistical analysis was performed with Statistical Package for the Social Sciences (SPSS) Programme (Green, Salkind, & Akey, 1997). After conducting Factor Analyses with the measures of Arthritis Self Efficay Scale and Posttraumatic Growth Inventory, a correlation matrix was created in order to see the correlations between the variables of the present study. After having the results of the correlation analyses, seven separate regression analyses were conducted. Anxiety, depression, total score of HADS, and posttraumatic growth (for total score and three factors) were used as dependent variables. The same set of independent variables were used in all regression analyses. Finally, the coefficent of inter-judge agreement was calculated using Cohen (1960) method for analysing the responses to one open-ended question.

Prior to analyses, all variables were examined for accuracy of data entry, missing values and multivariate outliers. Since all questions were asked to the patients by the researchers there were only two or three missing values. No cases were identified through Mahalanobis distance as multivariate outliers. Seven patients had a diagnosis of psychiatric disease and were excluded from further analyses, leaving 117 RA patients.

CHAPTER III

RESULTS

3.1 Overview

The results will be presented in separate sections. Firstly, descriptive statistics of the illness related variables will be given. Then the results for scales developed for the present study will be presented, followed by anxiety and depression levels. Finally, the predictors of psychological distress (anxiety, depression, and total score of HADS) and posttraumatic growth (total PTG and factors of PTGI) will be given.

3.2 Descriptive Statistics for Illness Related Variables

Descriptive data on illness related variables are presented in Table 3.

As can be seen from Table 3, the mean duration of RA was 9 years. About half of the patients also had another illness. Majority were previously hospitalized, but did not have an operation. Mean pain and fatigue were rated as moderate, at the middle point of the VAS scale. Mean acuteness of disease was rated at a relatively higher point. Finally, mean impact of illness on daily activities and perceived disease severity were rated at higher points.

Table 3. *Descriptive statistics for illness related variables*

Variable	N (Percent)	Mean	SD	Min.-Max.	Range
Duration of RA (years)		9.0	8.59	1-40	39
Other Disease					
Yes	55 (47.01)				
No	62 (52.99)				
Hospitalization history					
Yes (hospitalized before)	108 (92.30)				
No	9 (7.69)				
Operation history (Due to RA)					
Yes	12 (10.26)				
No	105 (89.74)				
Pain[1] (VAS/10cm)		5.02	3.22	0-10	10
Fatigue[1] (VAS/10cm)		5.68	3.26	0-10	10
Acuteness of disease[2] (1-5)		2.91	1.14	1-5	4
Impact of illness on daily activities[3] (1-5)		3.44	1.39	1-5	4
P. Disease severity[4]		3.52	1.23	1-5	4

[1]Current pain and fatigue level were measured by Visual Analog Scale (VAS/10 cm).

[2]Acuteness of disease was measured by one question, 'How much active/acute is your disease right now?' (1= not at all, 2= mild, 3= moderate, 4= great, 5= very great).

[3]The Impact of illness on daily activities was measured by one question 'How much does your disease interfere with your daily activities recently' (1= not at all, 5= very great).

[4]The perceived disease severity was measured by 4 questions. They are related with arthritis pain and they measured frequency of pain, frequency of stiffness, severity of pain during last month.

3.3 Results for Scales Developed for the Present Study

3.3.1 Resource Loss Scale (RLS)

Mean resource loss scores were obtained by summing up the responses to the 23 items of the RLS and dividing them by the numbers of items (M= 2.21, SD= 0.89, Min= 1, Max= 5, Range= 4). The median value showed that fifty percent of patients scored 2.1. Considering that 5 is the maximum possible score that can be obtained from the RLS, a mean score of 2.21 and a median score of 2.1 showed that the sample on average had low to moderate levels of resource loss.

Cronbach alpha reliability of RLS was .94. Test-retest reliability was examined by administering RLS to 26% of the sample (30 patients) over two weeks. Pearson product moment correlation coefficient was .79 ($p<$. 001), showing satisfactory stability.

RLS has high positive correlation with anxiety (r= .56, $p<$.001), and depression (r= .53, $p<$.001) (See Table 6). These findings support the construct validity of the newly developed scale.

3.3.2 Religiousness Scale (RS)

Religiousness Behavior Subscale, (Yaparel, 1996) was used in the present study. In addition to this, one item which is "I believe that I am a religious person" rated as (1= completely wrong, 5= completely true) was also used to assess religiousness (M= 4.56, SD= 0.92, Min= 1, Max= 5, Range= 4). Correlations between the 10 items Religiousness Behavior Scale and one item measure of religiousness was very high (.70). Therefore, this single item was omitted from further analyses, and the 10 items Religiousness Behavior Subscale was used in the regression analyses. Subsequently, a total mean RS score was obtained simply by summing up the responses to the 10 items of RS and dividing them by the numbers of items (M= 4.64, SD= 0.68, Min= 2.20, Max= 5, Range= 2.80, Median= 5). Cronbach alpha reliability of the scale was high (.95), considering that 5 is the maximum possible score that can be obtained from the RS, a mean score of 4.64 and a median score of 5 showed that the patients on the average reported themselves as highly religious individuals.

3.3.3 The Arthritis Self Efficacy Scale (ASES)

In order to confirm that the present study data yielded a similar factor structure to the original, a factor analysis was conducted for the ASES (see Appendix C for the results of factor analysis of ASES). It yielded 4 factors, explaining 65.4% of the variance. Original ASES and the examination of the scree plot suggested a three-factors solution, which explained 60.1 per cent of the variance.

Although ASES scale has 3 subscales, which are self-efficacy pain scale, self-efficacy function scale, and self-efficacy other symptoms scale, since there were no specific hypothesis for different types of self-efficacy, the total mean score of ASES was used.

ASES mean scores were obtained simply by summing up the responses to the 20 items of the ASES and dividing them by the numbers of items (M= 2.89, SD= 0.92, Min= 1.05, Max= 5, Range= 3.95, Median= 2.85). Considering that 5 is the maximum possible score that can be obtained from the ASES, a mean score of 2.89 and a median score of 2.85 revealed that the sample reported moderately high levels of arthritis self-efficacy.

Cronbach alpha reliability of ASES was .93. Test-retest reliability was examined by administering ASES to 26% of the sample (30 patients) over two weeks. Pearson product moment correlation coefficient was .56 ($p<.01$).

ASES has high correlations with illness related variables especially high correlations with perceived severity of RA (r= -.56, $p<.001$), the impact of illness on daily activities (r= -.45, $p<.001$), fatigue (r= -.35, $p<.001$) and acuteness of illness (r= -.31, $p<.001$). (See Table 6). These findings showed that as perceived illness severity, the impact of illness on daily activities, fatigue, and acuteness of illness increased self-efficacy decreased, thus these results supported the construct validity of ASES.

3.3.4 Posttraumatic Growth Inventory (PTGI)

In order to see the factor structure of the PTGI, responses to the PTGI were subjected to factor analysis. The initial factor analysis of the PTG, employing principal components, varimax rotation, with the eigenvalue of 1.00 as the criterion yielded 4 factors, explaining 64.1 per cent of total variation. Examination of the scree plot suggested that three-factor solution explaining 59% of the variance is a better solution. A factor loading of .40 was employed as the criterion for the determining the item structure of these factors. Accordingly, three mean factor scores were obtained simply by summing up the responses to the items that belong to the factors and dividing them by the numbers of items.

The three factors were labeled as “changes in relationship with others”, “changes in philosophy of life”, and “changes in self perception”.

A total mean PTG score was obtained simply by summing up the responses to the items of PTGI and dividing them by the numbers of items (M= 2.50, SD= 1.23, Min= 0, Max= 5, Range= 5, Median= 2.57). In additon sum of the PTGI was also obtained which was 51.86 (SD= 25.91). Cronbach alpha reliability of the scale was high (.94) considering that 5 is the maximum possible score that can be obtained from the PTGI, a mean score of 2.50 and a median score of 2.57 showed that sample experienced moderate levels of posttraumatic growth.

Table 4, presents the three factors, their items, factor loadings, percentages of variance explained and the Cronbach alpha reliability coefficients.

Tablo 4. *Composition of factors of the PTGI with factor loadings, percentages of variance explained and Cronbach Alpha values*

Factors and Items	Factors		
	F1	F2	F3
Factor 1			
"Changes in relationship with others"			
(Variance explained 44.31%)			
(Cronbach Alpha .86)			
16. Putting effort into my relationships.	**.77**	.23	.13
15. Having compassion for others.	**.75**	.13	.22
21. I accept needing others.	**.61**	-.04	.44
6. Knowing that I can count on people in times of trouble.	**.57**	.37	.10
20. I learned a great deal about how wonderful people are.	**.57**	.38	.33
9. A willingness to express my emotions.	**.57**	.31	.22
8. A sense of closeness with others.	**.52**	.33	.31
Factor 2			
"Changes in philosophy of life			
(Variance explained 8.54%)			
(Cronbach Alpha .87)			
7. I established a new path for my life.	.13	**.84**	.09
3. I developed new interests.	.05	**.80**	.29
14. New opportunities are available which wouldn't have been otherwise.	.26	**.74**	.07
17. I'm more likely to try to change things, which need changing.	.45	**.67**	.14
11. I'm able to do better things with my life.	.11	**.61**	.57

Table 4 *continued*

Factors and Items	F1	F2	F3
Factor 3			
"Changes in self perception"			
(Variance explained 6.17%)			
(Cronbach Alpha .88)			
18. I have a stronger religious faith.	.58	.05	**.32**
4. A feeling of self-reliance.	.31	.55	**.41**
19. I discovered that I'm stronger than I thought I was.	.34	.50	**.49**
13. Appreciating each day.	.28	.08	**.80**
2. An appreciation for the value of my own life.	.20	.14	**.73**
12. Being able to accept the way things work out.	.15	.24	**.66**
1. My priorities about what is important in life.	.34	.23	**.60**
5. A better understanding of spiritual matters.	.49	.18	**.56**
10. Knowing I can handle difficulties.	.30	.43	**.51**

3.4 Anxiety and Depression Level

A total anxiety score was obtained by summing up the responses to the 7 items of HADS (M= 9.45, SD= 5.25, Min= 0, Max= 21). 68 RA patients (58.1%) scored above the threshold of possible anxiety, $\geq$ 8 on the anxiety scale. Cronbach alpha reliability of the scale was .81.

A total depression score was obtained simply by summing up the responses to the 7 items of HADS assessing depression (M= 8.87, SD= 5.18, Min= 0, Max= 20). 65 RA patients (55.6%) scored above the cut-off for possible depression, $\geq$ 8 on the depression scale. Cronbach alpha reliability of the scale was .79.

Aydemir (1997) reported mean scores of depression in physically ill patients as 8.04 (SD= 4.76) and mean score of anxiety as 9.35 (SD= 5.20). Therefore, it was concluded that RA patients experienced similar level of anxiety and depressive symptoms with other Turkish patient groups.

3.5 Thoughts Related to the Future of Rheumatoid Arthritis

In order to examine the thoughts of RA patients related to the future course of their disease, an open-ended question 'what do you think will happen in relation to the progress of your illness in the fortcoming five or ten years?', was asked. Several thoughts were identified in response to the question, After inspecting the replies they were classified under four categories as 'optimistic thoughts', 'pessimistic thoughts', 'fatalistics thoughts', and 'no opinion'. The reports which included the concepts such as 'thinking of recovering from the illness were labelled as 'optimistic thougts'. Replies that were related to pessimistic expectations, such as 'they can not recover from this illness, their illness will be worsened, illness will effect several other organs and hopeless thoughts were labeled as 'pessimistic thoughts'. Reports that mentioned fatalistic thoughts such as 'God help me, God knows the best thing, what happens is my fate were labeled as 'fatalistic thoughts'. Finally, reports mentioning having no idea about the illness and its future and that doctors know best were categorized as 'no opinion'.

In order to evaluate the replies to this open-ended question firstly, two judges, one of them is a professor in the psychology department (she is also supervisor of this thesis) and the other is the author of this thesis rated all the reports

independently. In the classification process, if one patient mentioned more than one category of thoughts in his/her answer, the responses were included in all relevant thought categories. Thus, one patient could obtain more than one rating. Then, the coefficent of inter-judge agreement, coefficient kappa, was calculated. It was found to be .71 (Cohen , 1960).

Table 5 presents examples and percentages of thoughts in each category.

Table 5. *Examples and percentages of thoughts in each category of RA patients about the future progress of their illness*

Categories	Examples	Percentage
Optimistic thoughts	'I think that I will recover'.	46.53%
	'I am well now and I will be even better in the future'.	
Pessimistic thoughts	'My health will worsen and probably I will die'.	54.46%
	'My hands can not hold anything and they will get even more distorted. Therefore, I will not be able to do my housework'.	
Fatalistic thoughts	'God knows everything, if he wants, he can cure me totally'.	33.66%
	'I hope my God helps me recover'.	
No opinion	'I do not know'.	30.69%
	'Doctors know how my disease will progress'.	

4.1 Correlations among Variables Used in the Regression Analyses

Table 6, presents the Pearson correlation coefficients among the independent and the dependent variables, which were anxiety and depression, and posttraumatic growth used in the regression analyses.

As can be seen from table 6, posttraumatic growth was negatively related to depression whereas it was positively related with optimistic/seeking social support coping, problem solving coping, and perceived social support. Anxiety was negatively related with gender (1= female, 2= male), problem solving coping, perceived social support and arthritis self-efficacy whereas it was positively related with fatigue, impact of illness on daily activities, severity of disease, helplessness coping, fatalistic coping, resource loss, and depression. Finally, depression was negatively related with years of education, optimistic/seeking social support coping, problem solving coping, perceived social support, posttraumatic growth, and arthritis self efficacy whereas it was positively related with fatigue, impact of illness on daily activities, perceived disease severity, helplessness coping, resource loss, and anxiety.

After examining the variables relating significantly to psychological distress (anxiety and depression) and posttraumatic growth, seven separate regression analyses were conducted. In all of these analyses the same set of independent variables were used. The results of these analyses are presented in the following sections.

Table 7 presents the mean and standard deviations of variables used in the regression analyses.

Table 6.
Pearson Correlations of Medical history and Demographic variables and other study variables

	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Gender	.00	.25**	.07	.06	-.01	.03	.07	-.07	-.10	.03	-.25**	-.02	-.36**
2. Age		-.41**	-.16	.03	.32**	-.06	.40**	.08	.03	-.02	.06	-.03	.27**
3. Education			.09	.31**	-.13	.01	-.13	-.03	-.25**	-.02	-.22*	-.15	-.42**
4. Marital status				.14	-.30**	.06	-.23*	-.01	-.09	.17	.15	.03	-.19*
5. Income					.07	-.06	-.00	.03	-.12	-.10	-.10	-.28**	-.25**
6. Ra duration						.04	.14	.28**	.08	-.12	-.07	.08	.07
7. Hospitalization							.08	.10	-.12	.04	.05	.06	.06
8. Other disease								-.09	.16	-.08	.03	-.04	.07
9. Operation									.05	.03	.06	.03	.10
10. Fatigue										.36**	.24**	.25**	.16
11. Acuteness of illness											.29**	.32**	.00
12. Impact of illness on daily activities												.44**	.21*
13. P. Severity of RA													.06
14. Fatalistic coping													

* Correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed).

Table 6. *Continued*

	15	16	17	18	19	20	21	22	23	24
1. Gender	-.14	.01	-.15	.04	-.14	-.13	.05	-.08	-.15	-.28**
2. Age	.12	.04	.05	-.03	.02	.15	-.12	-.06	-.04	-.04
3. Education	-.13	.04	-.26**	.09	-.17	-.34**	.27**	.07	-.21*	-.10
4. Marital status	-.14	-.08	-.10	-.10		.03	.04	-.09	.01	-.09
5. Income	-.10	-.05	-.13	.23*		-.22*	.30**	.03	-.10	-.15
6. Ra duration	.16	.15	.02	.03	.08	-.02	-.18	.03	.05	.03
7. Hospitalization	.02	.01	.05	-.02	.22*	.09	-.12	.01	.01	.09
8. Other disease	-.01	-.13	.01	-.04	.14	.01	-.16	-.11	.10	.10
9. Operation	.07	.13	.05	.06	.09	-.11	-.07	.16	-.04	.02
10. Fatigue	-.01	-.04	.24*	.04	.26**	.08	-.35**	.06	.25**	.29**
11. Acuteness of illness	-.23*	-.12	.07	-.13	.22*	-.06	-.31**	.13	.10	.17
12. Impact of illness on daily activities	-.05	-.04	.19*	-.09	.28**	-.01	-.45**	-.07	.40**	.24*
13. P. Severity of RA	.00	-.07	.25**	-.04	.26**	.13	-.56**	.07	.28**	.26**
14. Fatalistic coping	.49**	.34**	.35**	-.01	.22*	.30**	-.24**	.11	.05	.19*
15. Optimistic coping		.72**	.01	.22*	-.14	.31**	.11	.36**	-.27**	-.18
16. Problem solving coping			-.15	.19*	-.15	-.01	.15	.38**	-.34**	-.20*
17. Helplessness coping				-.13	.41**	.21*	-.36**	-.02	.35**	.44**
18. Perceived Social Sup.					-.27**	.07	.21*	.41**	-.25**	-.30**
19. Resource Loss						-.03	-.52**	-.14	.53**	.56**
20. Religion							-.20*	.08	.05	.00
21. ASES								.14	-.51**	-.42**
22. PTG									-.25**	-.10
23. Depression										.72**
24. Anxiety										

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed).

5.1 Regression Analyses: Predictors of Anxiety, Depression and Posttraumatic growth

In order to examine the variables that are related to psychological distress (anxiety and depression) and posttraumatic growth seven separete multiple regression analyses were conducted: 1. For anxiety (HADS-Anxiety), 2. For depression (HADS-Depression), 3. For total score of HADS, 4. For Posttraumatic Growth, (PTGI) and three subscales of PTGI. In all of these analyses, the same set of variables were used as predictor variables. Independent variables were entered in four blocks. In the first block socio-demographic variables, namely gender (1= female, 2= male), age, years of education, marital status (1= single, 2= maried) and income were entered. In the second block, illness related variables, namely RA duration, hospitalization history, operation history, having other disease or not, fatigue, perceived acuteness of disease, the impact of ilness on daily life, perceived disease severity were entered. In the third block, factors of Ways of Coping Inventory (problem solving coping, fatalist approach, helplessness coping, and optimistic/seeking social support style of coping), total scores of perceived social support, resource loss, religiousness were entered. Finally, in the last block total scores of arthritis self efficacy were entered. Thus, all together there were twenty-one predictors entered in four blocks in all of the seven regression analyses.

The means, standard deviations and ranges of variables that were used in the four blocks of the regression analyses are presented in Table 7 (For socio-demographic variables see method section Table 2, p. 56, and for descriptive section on illness related variables see results section Table 3, p. 69).

Table 7.
Means, standard deviations and ranges of independent variables

Block	Predictor Variables	Method	Mean	SD	Range
1	Socio-demographic variables Age, gender, education, marital status, income	Enter			
2	Illness Related Variables RA duration, Hospitalization history, Operation history, Having other disease, Fatigue, P. acuteness of disease, The impact of illness on daily activities, P. disease severity	Stepwise			
3	Resources	Stepwise			
	Resource loss		2.21	.89	1-5
	Religiousness		4.64	.68	2.2-5
	MSPSS		5.12	1.42	1-7
	Problem solving coping		2.51	.41	1.3-3
	Fatalistic coping		2.55	.32	1.4-3
	Optimistic/Seeking support coping		2.45	.37	1.2-3
	Helplessness coping		2.19	.51	1-3
4	ASES	Stepwise	2.89	.92	1-5

5.2 Predictors of Anxiety

In order to evaluate how well anxiety is predicted by socio-demographic variables, illness related variables, coping strategies, perceived social support, religiousness, resource loss and Arthritis self efficacy, stepwise multiple regression analysis was conducted. Variables were entered in four blocks (see Table 7).

The results of the regression analysis are presented in Table 8.

The results showed that the first step explained .09% of the variance [F (5, 110) = 2.14, p = .07]. Gender (1= Female, 2= Male) appeared as a significant predictor, however this step was not significant. When illness related variables were entered in to the regression equation (step 2), fatigue accounted for 7% of the variance [F(1, 109) = 9.30, p <. 01]. After resources were entered (Step 3), resource loss accounted for 22% of the variance [F(1, 108) = 38.76, p<. 001]. Helplessness coping accounted for 4% of the variance in step 4 [F(1, 107) = 7.51, p <. 01]. Perceived social support (MSPSS) accounted for 3% of the variance in the last step [F(1, 106) = 4.98, p <. 05]. Totally, all variables explained 45% of the variance in anxiety [F(9, 115) = 9.58, p <. 001].

According to the results, in the final model, gender (1= female, 2= male) and perceived social support (MSPSS) appeared to be negatively related to anxiety. On the other hand fatigue, resource loss, and helplessness coping appeared to be positively related to anxiety.

Table 8.
Predictors of anxiety

Steps	Variables	β	t	pr.	R^2	df	F change
1	Gender	-.25	-2.64*	-.24	.09	5,110	2.14
2	Gender	-.24	-2.56*	-.24			
	Fatigue	.28	3.05**	.28	.16	1,109	9.30**
3	Gender	-.21	-2.61**	-.24			
	Fatigue	.16	1.97*	.19			
	Resource Loss	.49	6.23***	.51	.38	1,108	38.76***
4	Gender	-.20	-2.58**	-.24			
	Resource Loss	.42	5.07***	.44			
	Helplessness	.23	2.74**	.26	.42	1,107	7.51**
5	Gender						
	(1= female; 2= male)	-.20	-2.62**	-.25			
	Age	-.00	-.05	-.00			
	Education	.15	1.67	.16			
	Marital Status	-.03	-.45	-.04			
	Income	-.07	-.93	-.09			
	Fatigue	.16	2.04*	.19			
	Resource Loss	.37	4.40***	.39			
	Helplessness coping	.22	2.73**	.26			
	MSPSS	-.18	-2.23*	-.21	.45	1,106	4.98*

*p<.05, **p<.01,***p<.001

5.3 Predictors of Depression

Stepwise multiple regression analysis was also conducted to see how well depression symptoms is predicted by socio-demographic variables, illness related variables, coping strategies, perceived social support, religiousness, resource loss and Arthritis self efficacy. As given in the previous section, variables were entered in four blocks.

The results of regression analysis are presented in Table 9.

The results of regression analysis showed that the first step explained .07% of the variance [$F(5, 110) = 1.67$, $p = .15$]. Education (in years) appeared as significant predictor in the first step but this step was not significant. When illness related variables were entered in to the regression equation (step 2), the impact of illness on daily activities accounted for 12% of the variance [$F(1, 109) = 16.27$, $p <. 001$]. After resources were entered (Step 3), resource loss accounted for 18% of the variance [$F(1, 108) = 31.18$, $p <. 001$]. Problem solving coping accounted for 7% of the variance in step 4 [$F(1, 107) = 13.04$, $p <. 001$]. Arthritis self efficacy (ASES) accounted for 3% of the variance in the last step [$F(1, 106) = 5.73$, $p <. 05$]. Totally, all variables explained 47% of the variance in depression [$F(9,115) = 10.42$, $p <. 001$].

According to the results, in the final model, problem solving coping and arthritis self efficacy (ASES) appeared to be negatively related to depression. On the other hand the impact of illness on daily activities and resource loss appeared to be positively related to depression.

Table 9.
Predictors of depression

Steps	Variables	β	t	Pr.	R^2	df	F change
1	Education						
	(in years)	-.23	-2.05*	-.19	.07	5,110	1.67
2	Impact of illness on						
	daily activities	.37	4.03***	.36	.19	1,109	16.27***
3	Impact of illness on						
	daily activities	.25	2.97**	.28			
	Resource Loss	.45	5.58***	.47	.37	1,108	31.18***
4	Impact of illness on						
	daily activities	.26	3.20**	.30			
	Resource Loss	.41	5.29***	.46			
	Problem solving cop.						
		-.27	-3.61***	-.33	.44	1,107	13.04***
5	Gender						
	(1= female;						
	2= male)	-.05	-.60	-.06			
	Age	-.12	-1.44	-.14			
	Education	-.08	-.95	-.09			
	Marital Status	-.02	-.25	-.02			
	Income	.02	.28	.03			
	Impact of illness on						
	daily activities	.18	2.10*	.20			
	Resource Loss	.32	3.73***	.34			
	Problem solving cop.						
	ASES	-.24	-3.36***	-.31			
		-.23	-2.39*	-.23	.47	1,106	5.73*

*p<.05,**p<.01,***p<.001

5.4 Predictors of Total Score of HADS (Depression and Anxiety)

Stepwise multiple regression analysis was also conducted to see how well psychological distress (total score of HADS) is predicted by socio-demographic variables, illness related variables, coping strategies, perceived social support, religiousness, resource loss and Arthritis self efficacy. As given in the previous section, variables were entered in four blocks.

The results of regression analysis are presented in Table 10.

The results of regression analysis showed that the first step explained .08% of the variance [$F(5, 110) = 1.84$, $p = .11$]. Only gender (1= Female, 2= male) was a significant predictor in the first step but this step was not significant. When illness related variables were entered in to the regression equation (step 2), the impact of illness on daily activities accounted for 8% of the variance [$F(1, 109) = 10.41$, $p <. 01$]. After resources were entered (Step 3), fatigue accounted for 3% of the variance [$F(1, 108) = 4.79$, $p <. 05$]. Resource loss accounted for 22% of the variance in step 4 [$F(1, 107) = 39.53$, $p <. 001$]. Problem solving coping accounted for 4% of the variance in the step 5 [$F(1,106) = 8.45$, $p < .01$]. Helplessness coping accounted for 3% of the variance in the last step [$F(1, 105) = 4.06$, $p <. 05$]. Totally, all variables explained 48% of the variance in total score of HADS [$F(10, 115) = 9.49$, $p <. 001$].

According to the results, in the final model, problem-solving coping appeared to be negatively related to HADS. On the other hand resource loss and helplessness coping appeared to be positively related to HADS.

Table 10.
Predictors of HADS

Steps	Variables	β	t	pr.	R^2	df	F change
1	Gender	-.19	-1.98*	-.19	.08	5,110	1.84
2	Impact of illness on daily activities	.30	3.23**	.30	.16	1,109	10.41**
3	Impact of illness on daily activities	.26	2.74**	.26			
	Fatigue	.20	2.19*	.21	.19	1,108	4.79*
4	Resource Loss	.50	6.29***	.52	.41	1,107	39.53***
5	Resource Loss	.47	6.01***	.50			
	Problem solving cop.	-.21	-2.91**	-.27	.45	1,106	8.45**
6	Gender	-.11	-1.50	-.14			
	Age	-.04	-.50	-.05			
	Education	.05	.56	.06			
	Marital Status	-.02	-.25	-.03			
	Income	-.08	-1.08	-.11			
	Impact of illness on daily activities	.14	1.80	.17			
	Fatigue	.09	1.16	.11			
	Resource Loss	.42	5.15***	.45			
	Problem solving cop.	-.20	-2.71**	-.26			
	Helplessness coping	.16	2.02*	.19	.48	1,105	4.06*

*p<.05,**p<.01,***p<.001

5.5 Predictors of Posttraumatic Growth

In order to evaluate how well total score of posttraumatic growth is predicted by socio-demographic variables, illness related variables, coping strategies, perceived social support, religiousness, resource loss and Arthritis self efficacy, stepwise multiple regression analysis was conducted. Variables were entered in four blocks. In this regression analysis, in the second step anxiety and depression scores were also entered regression analysis due to theoretical significance of depression and anxiety with PTG.

The results of regression analysis are presented in Table 11.

The results of regression analysis showed that the first step explained .04% of the variance [$F(5, 110) = .93$, $p = .47$]. This step was not significant and none of the variables was significant in this step. When illness related variables and depression and anxiety were entered in to the regression equation (step 2), depression accounted for 8% of the variance [$F(1, 109) = 9.39$, $p <. 01$]. After resources were entered (Step 3), gender (1= female, 2=male), perceived disease severity accounted for 4% of the variance [$F(1, 108) = 5.19$, $p <. 05$] and also gender appeared as a significant predictor in this step. Perceived social support (MSPSS) accounted for 10% of the variance in step 4 [$F(1, 107) = 14.62$, $p <. 001$]. Problem solving coping accounted for 7% of the variance in the in the last step [$F(1, 106) = 10.96$, $p <. 001$]. Totally, all variables explained 33% of the variance in posttraumatic growth [$F(9,115) = 5.75$, $p <. 001$].

According to the results, in the final model, gender (1=female, 2=male) was negatively whereas perceived disease severity, perceived social support (MSPSS) and problem-solving coping appeared to be positively related to PTG.

Table 11.
Predictors of total score of PTGI

Steps	Variables	β	t	pr.	R^2	df	F change
1	Socio-demographics				.04	5,110	.93
2	Depression	-.29	-3.06**	-.28	.12	1,109	9.39**
3	Gender	-.18	-1.96*	-.19			
	Depression	-.34	-3.62***	-.33			
	P. Disease severity	.22	2.28*	.21	.16	1.108	5.19*
4	Gender	-.18	-2.03*	-.19			
	Depression	-.25	-2.69**	-.25			
	P. Disease severity	.18	1.98*	.19			
	MSPSS	.34	3.82***	.35	.26	1.107	14.62***
5	Gender	-.16	-1.96*	-.19			
	Age	-.08	-.90	-.09			
	Education	.04	.35	.03			
	Marital status	-.06	-.72	-.07			
	Income	.01	.11	.01			
	Depression	-.16	-1.71	-.16			
	P. Disease severity	.18	2.05*	.20			
	MSPSS	.30	3.52***	.32			
	Problem solving cop.	.29	3.31***	.31	.33	1.106	10.96***

*p<.05, **p<.01,***p<.001

5.5.1 Predictors of PTG Factor 1: Changes in Relationship with Others

In order to evaluate how well the factor of posttraumatic growth which is "Changes in relationship with others" is predicted by socio-demographic variables, illness related variables, coping strategies, perceived social support, religiousness, resource loss and Arthritis self efficacy, stepwise multiple regression analysis was conducted. Variables were entered in four blocks. In this regression analysis, in the second step anxiety and depression scores were also entered regression analysis due to theoretical significance of depression and anxiety with PTG.

The results of regression analysis are presented in Table 12.

The results of regression analysis showed that the first step explained .01% of the variance [$F(5, 110) = .23$, $p = .95$]. This step was not significant and none of the variables was significant in this step. When illness related variables and depression and anxiety were entered in to the regression equation (step 2), acuteness of disease accounted for .04% of the variance [$F(1, 109) = 3.94$, $p <. 05$]. After resources were entered (Step 3), perceived social support (MSPSS) accounted for 14% of the variance [$F(1, 108) = 19.52$, $p <. 001$] in the third step. Problem-solving coping accounted for 5% of the variance in the last step [$F(1, 107) = 6.38$, $p <. 05$]. Totally, all variables explained 24% of the variance in posttraumatic growth "Changes in relationship with others" [$F(8,115) = 4.15$, $p <. 001$].

According to the results, in the final model, acuteness of the disease, perceived social support (MSPSS) and problem-solving coping appeared to be positively related to PTG "Changes in relationship with others."

Table 12.
Predictors of Changes in relationship with others

Steps	Variables	β	t	pr.	R^2	df	F change
1	Socio-demographics				.01	5,110	.23
2	Acuteness of disease	.19	1.99*	.19	.05	1,109	3.94*
3	Acuteness of disease	.23	2.53*	.24			
	MSPSS	.40	4.42***	.39	.19	1.108	19.52***
4	Gender	-.08	-.93	-.09			
	Age	-.06	-.59	-.06			
	Education	-.01	-.12	-.01			
	Marital status	-.02	-.20	-.02			
	Income	-.05	-.54	-.05			
	Acuteness of disease	.25	2.84**	.27			
	MSPSS	.35	3.94***	.36			
	Problem solving cop.	.22	2.53*	.24	.24	1,107	6.38*

*p<.05, **p<.01,***p<.001

5.5.2 Predictors of PTG Factor 2: Changes in Philosophy of Life

In order to evaluate how well the factor of posttraumatic growth which is "Changes in philosophy of life" is predicted by socio-demographic variables, illness related variables, coping strategies, perceived social support, religiousness, resource loss and Arthritis self efficacy, stepwise multiple regression analysis was conducted. Variables were entered in four blocks. In this

regression analysis, in the second step anxiety and depression scores were also entered regression analysis due to theoretical significance of depression and anxiety with PTG.

The results of regression analysis are presented in Table 13.

The results of regression analysis showed that the first step explained 11% of the variance [$F(5, 110) = 2.77$, $p <. 05$] but none of the variables was significant in this step. When illness related variables and depression and anxiety were entered in to the regression equation (step 2), depression accounted for 15% of the variance [$F(1, 109) = 22.62$, $p <. 001$] and age were also appeared as significant predictors. After resources were entered (Step 3), problem-solving coping accounted for 9% of the variance [$F(1, 108) = 14.07$, $p <. 001$]. Perceived social support (MSPSS) accounted for 4% of the variance in the last step [$F(1, 107) = 6.73$, $p <. 01$]. Totally, all variables explained 39% of the variance in posttraumatic growth "Changes in philosophy of life [$F(8,115) = 8.47$, $p <. 001$].

According to the results, in the final model, age and depression were negatively whereas perceived social support (MSPSS) and problem-solving coping appeared to be positively related to PTG "Changes in philosophy of life."

Table 13.

Predictors of changes in philosophy of life

Steps	Variables	β	t	pr.	R^2	df	F change
1	Socio-demographics				.11	5,110	2.77*
2	Age	-.19	-2.03	-.19			
	Depression	-.41	-4.76***	-.42	.26	1,109	22.62***
3	Age	-.20	-2.25	-.21			
	Depression	-.30	-3.46***	-.32			
	Problem solving cop.	.31	3.75***	.34	.35	1,108	14.07***
4	Gender	-.15	-1.85	-.18			
	Age	-.18	-2.03*	-.19			
	Education	.11	1.22	.12			
	Marital status	-.10	-1.24	-.12			
	Income	.06	.75	.07			
	Depression	-.25	-2.99**	-.28			
	Problem solving cop.	.28	3.47***	.32			
	MSPSS	.21	2.59**	.24	.39	1,107	6.73***

*p<.05, **p<.01,***p<.001

5.5.3 Predictors of PTG Factor 3: Changes in Self Perception

In order to evaluate how well the factor of posttraumatic growth which is "Changes in self perception" is predicted by socio-demographic variables, illness related variables, coping strategies, perceived social support, religiousness, resource loss and Arthritis self efficacy, stepwise multiple regression analysis was conducted. Variables were entered in four blocks. In this regression analysis, in the second step

anxiety and depression score were also entered regression analysis due to theoretical significance of depression and anxiety with PTG.

The results of regression analysis are presented in Table 14.

The results of regression analysis showed that the first step explained .05% of the variance [$F(5, 110) = 1.09$, p=. 37] but none of the variables was significant in this step. When illness related variables and depression and anxiety were entered in to the regression equation (step 2), depression accounted for 7% of the variance [$F(1, 109) = 8.64$, $p <. 01$] and also gender (1= Female, 2= Male) appeared as a significant predictor in this step. After resources were entered (Step 3), perceived disease severity accounted for 5% of the variance [$F(1, 108) = 7.38$, $p <. 01$]. Problem solving coping accounted for 9% of the variance in the step 4 [$F(1, 107) = 12.80$, $p <. 001$]. Perceived social support (MSPSS) accounted for 6% of the variance in the last step [$F(1, 106) = 9.56$, $p <. 001$]. Totally, all variables explained 32% of the variance in posttraumatic growth "Changes in self perception" [$F(9,115) = 5.62$, $p <. 001$].

According to the results, in the final model, gender (1= Female, 2= Male) appeared to be negatively whereas; perceived disease severity, problem-solving coping and perceived social support (MSPSS) appeared to be positively related to PTG "Changes in self perception.

Table 14.

Predictors of changes in self perception

Steps	Variables	β	t	pr.	R^2	df	F change
1	Socio-demographics				.05	5,110	1.09
2	Gender						
	(1= Female, 2= Male)	-.20	-2.16*	-.20			
	Depression	-.27	-2.94*	-.27	.12	1,109	8.64**
3	Gender						
	(1= Female, 2= Male)	-.22	-2.38*	-.22			
	Depression	-.34	-3.64***	-.33			
	P. Disease severity	.26	2.72**	.25	.17	1,108	7.38**
4	Gender						
	(1= Female, 2= Male)	-.20	-2.33*	-.22			
	Depression	-.23	-2.41*	-.23			
	P. Disease severity	.25	2.79**	.26			
	Problem solving cop.	.32	3.58***	.33	.26	1,107	12.80***
5	Gender						
	(1= Female, 2= Male)	-.20	-2.40*	-.23			
	Age	-.03	-.34	-.03			
	Education	.01	.09	.01			
	Marital status	-.08	-.98	-.10			
	Income	-.00	-.01	-.00			
	Depression	-.17	-1.80	-.17			
	P. Disease severity	.22	2.54*	.24			
	Problem solving cop.	.28	3.27***	.30			
	MSPSS	.27	3.09**	.29	.32	1,106	9.56**

*p<.05, **p<.01,***p<.001

6.1 Overall Summary of the Predictors for all Dependent Variables

Overall summaries of all regression analyses for all dependent variables are presented in Table 15.

Table 15.
Significant predictor variables for all dependent variables

	Anxiety	Depression	HADS	PTG (Total)	Changes in Relationship with others	Changes in philosophy of life	Changes in self perception
1.Socio-demographic variables	*Gender (-)			Gender (-)		Age (-)	Gender (-)
2. Illness related variables	Fatigue (+)	Impact of illness on daily activites (+)		P. Disease severity (+)	Acuteness of disease (+)	Depression (-)	P. Disease severity (+)
3. Resources	R. Loss (+) Helplessness coping (+) MSPSS (-)	R. Loss (+) Problem solving c. (-)	R. Loss (+) Problem solving c. (-) Helplessness coping (+)	Problem solving c. (+) MSPSS (+)	Problem solving c. (+) MSPSS (+)	Problem solving c. (+) MSPSS (+)	Problem solving c. (+) MSPSS (+)
4. ASES		ASES (-)					

* (1= Female; 2 = Male)
+ (positive correlation), - (negative correlation)

CHAPTER IV

DISCUSSION

4.1 Overview

Chronic diseases such as RA, causes psychological distress for patients. The main objective of the present study was to examine patients' adjustment to RA. Adjustment was conceptualized as lack of psychological distress, namely anxiety and depression and the presence of growth. The main aim of the present study was to investigate variables related to psychological distress and PTG experienced by RA patients, more specifically, relationship of sociodemographic variables, illness related variables, resources such as arthritis self efficacy, perceived social support, religiousness, ways of coping and resource loss with anxiety, depression, and PTG levels of the patients were examined by using Hobfoll's (1988) COR theory as a guiding framework. In this section the results of the current study will be discussed. Firstly, characteristics of the study sample and the results in regards to the dependent variables, namely psychological distress (anxiety, depression and total psychological distress) and posttraumatic growth (total score and three subcales) will be discussed. Then, limitations of the study, clinical implications, and suggestions for future research will be presented.

4.2 Characteristics of the Sample

The sample of the current study included mostly female patients, who were married, and had low education levels. Majority were unemployed and had low-income levels. So, it can be said that the present sample of RA patients are likely to be at risk for psychological distress due to their gender, education, income and work status. Only marital status may be a protective factor, because married patients may receive more social support than single RA patients.

The examination of illness related variables revealed that the mean duration of RA was 9 years (SD= 8.59, Range 1- 40 years). Half of the patients had another disease. Although, very limited number of patients was operated due to RA, most of them were hospitalized due to RA. Patients reported moderate levels of pain and fatigue. However, they reported higher levels of perceived disease severity and impact of illness on their daily activities. As a conclusion, the present sample had a representation of a wide variety of RA patients in regards to the illness related variables. These patients experienced relatively high level of physical problems such as pain, fatigue, perceived disease severity and impact of illness on daily activities and they also experienced psychological problems.

Although, RA patients had several physical and psychological problems due to having RA, they use general and specific coping strategies to cope with life demands (general) and with the difficulties related to their illness (specific). General coping strategies includes fatalistic coping, problem solving coping, optimistic/seeking social support coping, and helplessness coping. The means for the general four types of coping were very close to each other. Therefore, it can be said

that the present sample of RA patients uses all types of coping to deal with problems in their lives. In general, Problem-solving coping was helpful for adjustment, however helplessness coping was destructive. So it can be said that problem-focused coping led to less psychological distress, whereas, emotion-focused coping led to higher psychological distress.

RA patients also used domain specific coping to cope with difficulties related to their illness. Coping with specific problem of RA was assessed with the Arthritis Self Efficacy Scale (ASES). RA patients experienced relatively high levels of domain specific self-efficacy (the mean of ASES was 2.89, Min= 1.05, Max= 5). The median value showed that fifty percent of patients scored 2.85. So, it can be said that for some RA patients' perception of coping with specific problems of RA is high. It is important to examine variables related to this perception in order to focus on them in future intervention studies. The zero order correlations showed that ASES is positively related to education and income, and negatively related to illness severity measures, helplessness coping, resource loss and religiousness. Thus, it seems that having resources contributes positively to specific self-efficacy beliefs, whereas, illness severity undermines efficacy. In this light, it seems important to facilitate the resources of RA patients and to combat their helplessness.

Religiousness was a resource and it can be accepted as another way of coping. Most of the RA patients reported themselves as highly religious patients. In addition, these patients reported relatively high levels of perceived social support. Thus, it can be said that RA patients in the current study had several resources to cope with their psychological distress.

In the present study, thoughts of RA patients related to the future of their illness were assessed with an open-ended question. The results revealed that about slightly more than half of the RA patients had pessimistic thoughts related to the future of their illness, whereas, less than half had positive thoughts. Higher levels of psychological distress may be related to pessimistic expectations. In line with the cognitive view, which proposes that it is not the event, but the view the person takes of the event that determines how stressful the situation is (Beck, Emery, & Greenberg, 1985), the expectations of RA patients nead to be explored and modified to give them a more positive outlook.

4.3 Adjustment of RA Patients

4.3.1 Psychological Distress: Anxiety and Depression

In the current study, Hospital Anxiety and Depression Scale (HADS) was used to assess anxiety, depression and total psychological distress. HADS has been extensively validated and used in other studies to assess anxiety and depression (Aydemir, 1997; Barlow et al., 2002; Zigmond & Snaith, 1983; Treharne et al., 2005).

When the results of psychological distress were examined, it was found that patients' mean anxiety score was 9.45. This score is relatively higher than the results of Barlow et al.'s (2002) study, in a sample of RA patients. They found that the mean anxiety was 7.43 and 8.18, respectively at time 1 and time 2 (12 months later). In addition, Barlow et al. (2002) reported that 58% of the RA patients scored above

the cut-off point (≥8) on the anxiety scale at both time1 and time 2. Similarly, 58.1% of the patients of the current study scored above the cut-off point (≥8) on the anxiety scale, showing high levels of anxiety. The finding suggested that the present sample of Turkish RA patients seem to experience relatively high levels of anxiety and that a substation portion of RA patients are at the risk category for anxiety (Barlow et al., 2002; Treharne et al., 2005). The anxiety level of patients in the current study, was also higher than Altan et al.'s (2004) study, which examined anxiety and depression levels of Turkish RA patients. They found that the mean anxiety score was 8.24. This difference may be related to socio-demographic differences between the samples. As noted in the section on characteristics of the sample the present sample were mostly from lower SES, which may bring serious problems with resources and means of support, which may in turn raise anxiety levels.

The result of the depression scale of HADS was examined to assess the depression level of RA patients. It was found that patients' mean scores of depression was 8.87, and 55.6% of them scored above the cut-off point (≥8) on the depression scale. When this finding is compared with the findings of other studies, the RA patients in the current study experienced higher levels of depression than other Turkish RA patients. Altan et al., (2004) reported that the mean score of depression was 6.50 in their sample. In the current study patients also experienced higher level of depression than RA patients in other countries, for example, Treharne et al. (2005) reported that mean depression score of RA patients as 6.46 on the HADS.

The higher level of anxiety and depression of the current sample may be explained with the possible socio-demographic differences especially, income level,

between these groups. Since the present study sample was chosen from a state hospital, which provided treatment to mostly lower income groups. The monthly incomes of most patients were lower than 500 new Turkish Liras. However, the study by Altan et al. (2004) was conducted at a university hospital, therefore, the sample of Altan et al. (2004) and Treharne et al. (2005) probably have higher socio-economic status than the current sample. The expectation that there is a relationship between the socio-economic status and psychological distress was based on Hobfoll's (2001) Conservation of Resources Theory. This theory stated that people invested economic resources to provide stress resistance. Another view of COR theory is that initial resource loss leads to future loss. The RA patients in the current sample have very low income, thus they have very limited economic resources initially and subsequently having RA might have detoriated their limited resources even further.

In conclusion, RA patients in the present study experienced psychological distress, manifested as anxiety and depression. The anxiety level was slightly higher than the depression level. The results also revealed that slightly higher percentage of patients experienced anxiety rather than depression. This finding was similar to El-Miedany and El-Rasheed (2002) study in which they found that anxiety was a more common disorder than depression for RA patients. According to the cognitive view of anxiety, the appraisal of symbolic and anticipatory threat, and uncertain elements, which are related to future events, are associated with anxiety (Beck et al., 1985). Patients may view RA as a progressive, deteriorating disease, which may threaten their independent living in the future. So, this may be the reason why anxiety was more common than depression in RA patients.

4.3.2 Posttraumatic Growth

In order to assess the posttraumatic growth level, Posttraumatic Growth Inventory (PTGI) (Tedeschi & Calhoun, 1996) was used. The reliability and the validity of this scale were also confirmed by several researchers (Calhoun et al., 2000; Cordova et al., 2001; Powell et al., 2003a; Sheikh, 2004). The results of the Posttraumatic Growth Inventory (PTGI) revealed that patients in the current study experienced a moderate level of PTG with an average score of 51.86 (Max=105). This finding was lower than the results of other studies (Cordova et al., 2001; Sheikh, 2004). Sheikh (2004) examined the PTG level of heart disease patients and they reported PTG levels of heart disease patients as 55.85. Cordova et al. (2001) investigated growth level of breast cancer patients. They found PTG level of breast cancer patients as M= 64.1. In addition, PTG level of RA patients was lower than other Turkish samples (Elçi, 2004; Kesimci, 2003). Kesimci (2003) examined the stress related growth in breast cancer patients by using another growth inventory, which is 'Stress Related Growth Scale' (Park, et al., 1996). She reported that breast cancer patients experienced high levels of stress related growth (M= 143, Min= 80, Max= 150). Elçi (2004) investigated posttraumatic growth level of parents of autistic children. He found that PTG mean score of the mothers were 64.6 and PTG mean score of fathers were 57.1. The moderate PTG scores of RA patients suggested that unlike breast cancer, because RA is a progressive detoriating disease and patients' future is bleak, they may experience less growth. RA patients have to continue to struggle with a progressing illness, whereas, after the operation breast cancer patients

recover if there is no metastasis and thus may experience less stress. Therefore, RA patients may experience less PTG than cancer patients.

PTG scores in the present study were also lower than other studies assesing PTG level of RA patients (Abraido-Lanza et al., 1998). It was found that the mean score of thriving was 3.01 (highest possible score as 4.00) revealing that RA patients experienced high levels of thriving. However, RA patients in the present study experienced lower levels of PTG than the sample of RA patients of Abraido-Lanza et al.'s (1998) study. This finding may again be explained by the lower SES levels of the present sample. Furthermore, 54.46% of the RA patients had pessimistic thoughts about future of their disease and they also experienced psychological distress (anxiety and depression symptoms). This explanation is consistent with the findings of Abraido-Lanza et al. (1998) that thriving was shown to be enhanced by positive affect rather than negative affect.

Factor analysis was conducted for PTGI and three factors, which were also used as dependent variables, were identified as a result. These factors were changes in relationship with others, changes in phiolosophy of life, and changes in self perception. These factors confirmed the theoretical concept of PTG. Tedeschi and Calhoun (1995) reported that PTG occurred in three domains, which are changes in self perception, changes in interpersonal relationship and changes in phiolosophy of life. In addition, the result of the three-factor solution of PTGI was also consistent with Powell et al.'s (2003a) study. They examined PTG level of people after war. They also identified three factors and reported that the three factors solution was a better fit than the five factors solution. However, the three-factor result of PTGI was different from Tedeschi and Calhoun (1996) and Cordova et al.'s (2001) results.

They found five factors which are new possibilities, relating to others, personal strenght, spiritual change and appreciation of life. So, it seems that there is no consensus on number of factors to be driven from the total PTG scale. However, there is a consensus about the existence of growth.

4.4 Predictors of Psychological Distress

4.4.1 Anxiety

The results of the regression analysis for anxiety showed that being female, perceived fatigue level, resource loss, helplessness coping and perceived social support were significant predictors of anxiety.

Contrary to the predictions among the socio-demographic variables, only gender appeared to be significantly related to anxiety. Being female related to higher levels of anxiety. This result was consistent with other studies reporting that gender was an important variable related to anxiety (Dowdy et al., 1996; Markenson, 1991). However, this finding was different from Treharne et al.'s (2005) study, which examined variables related to the well being of RA patients. They found that there were no differences between men and women in anxiety and depression. The finding of higher level of anxiety for females may be explained by higher anxiety proneness of females or that females may be more willing to report their negative feelings more than males. Another possible explanation is that RA may inhibit functioning of females in domestic duties. The majority of the RA patients in the present sample were housewives. So, the impact of RA on patients' functioning may be perceived as

a serious threat to carrying out the housewife role. Furthermore, patients may also become dependent on other people to continue their lives. Thus, the limitations of RA may pose a greater threat to females. However, although gender was found to be related to anxiety, this finding should be interpreted cautiously due to limited number of males in the current study.

Among the illness related variables, only perceived fatigue level was associated with level of anxiety. This finding supports Treharne et al.'s (2005) study in which fatigue was found to be positively related to anxiety. Results suggested that the perception of higher levels of fatigue leads to higher levels of anxiety. In contrast, to the findings of the present study, fatigue was not found to be related to anxiety in some other studies (Barlow et al., 1999; Treharne et., 2005). Although, Barlow et al. (1999) did not find fatigue as a predictor of anxiety, they found that high levels of fatigue predicted an increase in depression.

Fatigue was a main problem for most of the RA patients. An explanation for the relationship between fatigue and anxiety is that a higher level of fatigue probably leads to threat perception. The higher level of fatigue may inhibit functioning and may imply a worse course of the disease and increased thoughts of probability of mortality and limitations due to illness. Therefore, these negative influences and evaluations may lead to an increase in anxiety in RA patients.

As predicted, the results of the multiple regression on patients' anxiety revealed that resource loss contributes significantly to explaining anxiety in RA patients. It was found that, as hypothesized, patients with more resource loss reported more anxiety. This finding is consistent with the main principle of Hobfoll's (1989) COR theory which proposed that resource loss is the primary mechanism

leading to distress reactions. This result is also consistent with other studies which showed that personal and social resource loss have a significant relationship with psychological and physical health in the aftermath of natural disasters (Ironson et al., 1997; Smith & Freedy, 2000; Sümer, et al., 2005). Lane and Hobfoll (1992) examined the effects of resource loss in patients with severe chronic breathing disorder. They also found that resource loss leads to psychological distress such as anger.

It was found that helplessness coping, one of the factors of WCI, predicted anxiety. As expected, helplessness coping, which is a type of emotion-focused coping, was found to be positively related to anxiety. It is possible that RA patients, who feel a great deal of helplessness, are more likely to see their futures as uncertain. Since, helplessness probably leads to feeling that there is nothing to do to deal with the disease, which may in turn lead to anxiety. Helplessness was found to be associated with higher level of psychological distress in other studies as well (Chaney et al., 2004; Karanci & Dirik, 2003). Karanci and Dirik (2003) found that the use of helplessness coping more frequently lead to increased anxiety specific to surgery in emergency surgery patients.

Lazarus and Folkman (1984) divided coping into two groups, which are problem-focused and emotion-focused coping. Helplessness is a kind of emotion-focused coping. Emotion-focused coping may be adaptive in the early stages of illness. The present sample was not in the early stage of their illness. The mean duration of illness was 9 years. Therefore, patients of the present study were mostly suffering from relatively later stages of the disease. It was found that helplessness coping was positively related to anxiety. The explanation for this finding is that since

patients in the present sample were in the later stage of their disease, using emotion-focused coping starategies such as helplessness in this stage is not adaptive and probably leads to anxiety. Helplessness will bring an expectation of lack of control over the illness and the future and thus may trigger anxiety.

The relationship between helplessness coping and anxiety is also consistent with the COR model, which noted that coping is likely to be related to psychological distress by gaining or losing the needed resources (Hobfoll, 1989). However, this finding was inconsistent with the study of Hobfoll et al. (1995) who noted that coping is only weakly related to psychological variables. In the current study, helplessness coping appeared as a significant predictor in the last step of regression and it explained 4% of the variance. Therefore, it can be said that general coping behaviors are not weak but they are strong resources for combating psychological distress.

Several studies revealed that the use of more problem-focused coping (active coping) strategies rather than emotion-focused coping strategies leads to fewer psychological symptoms (Pakenham, 1999). This view was supported in the present study. That is helplessness coping, which is a kind of emotion-focused coping, was found to be related to higher levels of anxiety.

Coping is a complex phenomenan and coping strategies to deal with RA stress are varied. Downe-Wambold and Melanson (1998) found that elder people with RA most frequently used optimistic and self-reliant coping strategies and they least used evasive and emotive strategies. In another study, it was found that RA patients most frequently used problem-focused strategies (Bendtsen & Hornquist, 1994). However, in the current study, the most frequently used coping strategy was

fatalistic coping (M= 2.55), then the second most frequently used coping strategy was problem-solving coping (M= 2.51). The mean of all types of coping strategies, which were used by RA patients, were very close in the current sample. It means probably that RA patients use all types of coping strategies in different times to deal with life stress. These findings seem to support the proposition that there is no perfect way of coping for all conditions. According to Downe-Wambold and Melanson (1998) the choice of what type of coping will be used depends on the perception of patients about the stressful situation and severity of impairment. If the patients perceive their conditions as uncontrolable this leads to the use of passive coping strategies more. In the present study, the level of using both emotion and problem-focused strategies were very similar. Therefore, it may be concluded that RA patients in the present study had varying perceptions on the controllability of their condition.

Finally, perceived social support was found to be related to anxiety. As expected patients with higher levels of perceived social support reported lower levels of anxiety. This finding was in line with previous research (Cohen & Wills, 1985; Kraaimat et al., 1995; Thoits, 1986) and it also supported the buffering hypothesis of Cohen and Wills (1985) in RA patients. According to the buffering hypothesis, social support has a moderator role between stress and health. This finding was also in line with Harpur's (1997) study. Harpur (1997) who examined the effects of personal and social resources, and relationship-focused coping on distress among couples confronted with gynecological cancer found that feelings of high intimacy in patients and higher levels of spousal protection were related to lower psychological distress. The explanation for the relationship between social support and

psychological distress was that social support affects the choice of coping strategies. Higher levels of social support enhanced the use of active coping strategies to deal with stress. According to Moos and Holahan (2003) social resources increase self-esteem and self confidence and these feelings sustain coping efforts of people. In addition, Holahan and Moos (1987) reported that individuals in supportive families use more frequently active, problem focused coping strategies rather than avoidance coping strategies. Approach coping skills such as problem focused coping decreases potential adverse effects of negative events (Moos & Holahan, 2003).

The finding that higher levels of perceived social support decreases anxiety was also consistent with the proposition of COR theory (Hobfoll et, al., 2000). According to the COR theory, higher levels of social resources (social support) leads to lower levels of psychological distress. Therefore, it can be said that having higher levels of perceived social support provides resistance to stress.

In conclusion, being female, having resource loss, perceiving high levels of fatigue and helplessness coping seem to increase the anxiety levels of RA patients. On the other hand, social support is a protective factor in combating anxiety.

4.4.2 Depression

The results of regression analysis conducted to examine predictor variables for depression showed that the perceived impact of illness on daily activities, resource loss, problem solving coping and arthritis self-efficacy were significant predictors for depression.

None of the socio-demographic variables appeared to be significantly associated with depression. However, many studies have shown the effects of gender on depression (Djernes, 2006; Ponzo, et al., 2006). However, in the current study, gender was not related to depression in zero order correlations and it was not found to be a significant predictor of depression. This finding supports Treharne et al.'s (2005) study, which found that there was no significant difference between depression and anxiety levels of men and women in RA patients. These findings may be explained by insufficient number of males in the current sample. Treharne et al.'s (2005) study also had lower number of men then women.

As expected, the regression analysis showed that patients who perceived that their illness have a higher impact on daily activities experienced higher levels of depression. In other words, perception of loss of daily functioning leads to depression. This finding is line with the cognitive view, proposing that depression is related to perception of loss (Beck et al., 1985). This finding is also consistent with previous studies (Doeglas et al., 2004; Katz & Yelin, 1993). This finding was also in line with Smedstad et al.'s (1997) finding showing that physical disability, which probably leads to a disruption of daily activities, was a significant predictor of depression. This finding strongly supports the importance of functioning well in daily life for RA patients. Possible explanation for the positive relationship between impact of illness on daily activities and depression can also be explained from the COR theory perspective (Hobfoll, 1988, 1989), which proposed the primacy of resource loss in psychological distress. In addition, one corollary of COR theory showing that inital resource loss will lead to future loss seems important here. Patients' inability to function well may act as a primary influence in resource loss,

which, in turn, may decrease their self-efficacy and may contribute to increased depression, thus setting a vicious cycle.

The prediction based on COR theory about the relationship of resource loss with depression, was also supported. Resource loss, as predicted, was found to be related to depression. Higher levels of resource loss related to higher depression levels. This finding was consistent with the results of previous research in the literature, which reported that resource loss was related to psychological distress (Lane & Hobfoll, 1992; Shteyn et al., 2003; Smith & Freedy, 2000).

Another result of the regression analysis was that problem-solving coping inversely related to depression. This result was consistent with Pakenham's (1999) result. He reported that problem-focused coping was negatively associated with subjective health status; however, emotion-focused coping was associated with higher levels of depression in patients with a chronic disease such as multiple sclerosis.

Lastly, the results of the study supported the prediction that coping self-efficacy (ASES) inversely related to depression. Although, ASES was entered in the fourth step of the multiple regression analysis, it still contributed significantly to the prediction of depression. The connection between lower level of ASES and higher level of depression is consistent with prior research (Barlow et al., 2002; Lefebvre et al., 1999; Sciaffino & Revenson, 1995; Treharne et al., 2004). ASES measures domain specific coping and it seems to be a characteristics that enables coping. The presence of higher level of ASES seems incompatible with psychological distress. Another possible explanation for the inverse relationship between ASES and depression is that high coping self efficacy leads to the choice of appropriate coping

strategies which may in turn render the traumatic event into a benign one (Benight & Bandura, 2004). Therefore, RA patients who have higher levels of arthritis self-efficacy experienced less depression probably since they used more appropriate coping strategies.

In conclusion, perceiving high levels of impact of illness on daily activities and having resource loss seem to increase the depression levels of RA patients. On the other hand, use of problem solving coping and high levels of arthritis self-efficacy are protective factors in combating depression.

4.4.3 General Psychological Distress (Total Score of HADS)

The results of the regression analysis indicated that resource loss, problem solving coping and helplessness coping were significant predictors of psychological distress. As discussed in the previous sections, these variables were also significant predictors of anxiety or depression. The possible explanations for the relationships between these variables and general psychological distress are the same as discussed before for anxiety and depression results. Overall, it seems that psychological distress of RA patients is increased when they perceive higher resource loss and when they use helplessness coping. All these are within the scope of the COR theory and point out the need to provide support for RA patients to increase their personal and objective resources.

4.5 Predictors of Posttraumatic Growth (PTG)

4.5.1 Posttraumatic Growth (PTG) (PTGI Total)

The results of the regression analysis to examine the predictors of the total score of posttraumatic growth indicated that gender, perceived disease severity, perceived social support and problem solving coping were significant predictors of posttraumatic growth.

PTG scores were greater in female RA patients than in male RA patients. In other words, being female was significantly related with patients' PTG, which is consistent with the PTG literature (Kesimci, Göral, & Gençöz, 2005; Tedeschi & Calhoun, 1996). Tedeschi and Calhoun (1996) proposed that females are more likely to report positive changes in relationship and spirituality domains. They explained this finding by the fact that females are more likely to rely on these domains to cope with traumatic events.

Although previous studies indicated that socio-demographic variables such as age, marital status, education, income and employment were highly related to PTG (Bellizzi & Blank, 2006; Kesimci et al., 2005; Cordova et al., 2001; Polatinsky & Esprey, 2000; Updergraff et al., 2002) in the present study PTG was not found to be related to these variables. These findings may be related to the limited variance (all patients were very similar) in these variables. Most of the patients had very low income, low educational level, majority were married and unemployed. Another explanation is that these variables may not be consistently related to PTG. This explanation is consistent with the findings of other studies (Abraido-Lanza et al.,

1998; Powell et al., 2003a; Widows, Jacobsen, Booth-Jones, & Fields, 2005), which found no relationship between gender, age, income, education, marital status, employment and PTG.

Perceived disease severity was another predictor of PTG. It was found that increased perceived disease severity was associated with higher PTG. This finding was consistent with the PTG theory, which proposes that severe trauma, leads to more PTG. It is predicted by the PTG theory that severe trauma will cause the person to re-examine their basic schemas and change them. Kesimci et al. (2005) also found that a higher level of the stresfullness of the event was related to higher level of stress related growth in university students. This finding was also consistent with Bellizzi and Blank (2006) study. They reported that patients with invasive cancer experienced more PTG than patients with localized cancer. Similarly, Widows et al. (2005) also reported that more stressful appraisal of aspects of transplant experience in cancer patients with bone marrow transplantation was related to more PTG.

The results of the regression analysis also showed that perceived social support is a predictor of PTG. Higher levels of perceived social support was associated with higher levels of PTG. The literature findings in this area are not conclusive. Some studies found a relationship between PTG and social support (Cadell et al., 2003; Elçi, 2004; Park & Fenster, 2004) while other studies failed to find a relationship between social support and PTG, in heart disease patients (Sheikh, 2004), breast cancer patients (Cordova et al., 2001) and cancer patients undergoing bone marrow transplantation (Widows et al., 2005). Thus, the role of social support is not clear and needs to be examined further.

Problem solving coping was also found to be related to PTG. This finding was in line with previous studies which reported that problem focused coping strategies were associated with increased PTG (Bellizzi & Blank, 2006; Kesimci et al., 2005; Widows et al., 2005). Widows et al. (2005) examined PTG levels of cancer patients undergoing bone marrow transplantation. They found that greater PTG was related to problem solving coping. Interestingly they also found that avoidance coping was positively related to PTG.

Although resource loss was found to be a significant predictor for psychological distress, it did not appear as a significant predictor for PTG. In regression analysis, perceived social support (MSPSS) and problem solving coping accounted for the greatest portion of the variance. Thus, resource loss does not appear to be significant for PTG. This is an important finding. Resource loss relates to distress, but not to growth in RA patients. PTG needs to be examined further to understand why severity of illness relates to it, but not resource loss.

4.5.2 Posttraumatic Growth: 'Changes in Relationship with Others'

A separate regression analysis was also conducted to find out predictors of 'Changes in relationship with others' domain. The results showed that the acuteness of the disease, perceived social support and problem solving coping were significant predictors of Posttraumatic Growth in this domain.

Firstly, a finding with regard to PTG 'Changes in relationship with others' was that if the disease was perceived, as being in the acute phase this seemed to lead to more PTG. Acute phase of the disease is the most severe phase of the disease.

More severe trauma leads to more PTG. Therefore, higher level of acuteness of disease might lead to higher PTG in the relationship domain. It may also be possible that as the acuteness of the disease increases the patient receives more support from others, which in turn leads to a perception of better relationships.

Perceived social support and problem solving coping were found to be positively related to PTG 'Changes in relationship with others'. The possible explanations for the relationships between these variables and Posttraumatic Growth in 'Changes in relationship with others' are likely to be the same as explained before for the total score of PTG.

4.5.3 Posttraumatic Growth: 'Changes in Philosophy of Life'

It was found that age, depression, perceived social support and problem solving coping were significant predictors of 'Changes in the philosophy of life'.

Age was found to be negatively related to 'Changes in the philosophy of life'. That is younger RA patients reported more PTG in this domain. This finding was consistent with studies on survivors of war (Powell et al., 2003a) and breast cancer survivors (Bellizzi & Blank, 2006). However, this finding opposed to Abraido-Lanza et al.'s (1998) study. They found that age was not related to thriving. This finding may indicate that younger patients are more flexible in examining and changing their life perspectives in the face of negative life events than older patients, or they need to develop more positive views to face a likely longer future with the illness.

Depression was found to be negatively related to 'Changes in philosophy of life'. This finding was consistent with the finding of Calhoun and Tedeschi (1998). That is, PTG can co-occur with psychological distress. The RA patients in the present study experienced depression and PTG at the same time. However, higher levels of depression decreased PTG level. This finding is not line in with Cordova et al.'s (2001) finding. They found that psychological distress was unrelated to PTG. The current finding suggests that depression inhibits the development of positive changes in life perspectives. Negative thinking is a characteristic of depression. Thus, the negativity and pessimisim is likely to inhibit the perception of positive changes in ones' phiolosophy of life.

Perceived social support and problem solving coping were found to be positively associated with PTG 'Changes in philosophy of life'**.** The possible explanations for the relationships between these variables and Posttraumatic Growth 'Changes in philosophy of life**'** are the same as explained before for total score of PTG.

4.5.4 Posttraumatic Growth: 'Changes in Self Perception'

A separate regression analysis was also conducted to find out predictors of PTG 'Changes in self perception'. The results indicated that gender, perceived disease severity, perceived social support and problem solving coping were significant predictors. These predictors were also the predictors of PTG total score. Therefore, the possible explanations for the relationships between these variables

and Posttraumatic Growth ‘Changes in self perception' are likely to be the same as given before for total score of PTG.

4.6 Hypotheses of the Study

In this section support for the hypotheses of the current study will be presented.

Hypothesis 1: Some-sociodemographic characteristics such as gender, age, education, income and marital status will predict PTG and psychological distress. Males, young, higher educated, higher income and married patients are expected to have lower psychological distress and females, young, higher educated, higher income and married patients are expected to report higher PTG.

For anxiety: This hypothesis was partially supported. Only gender appeared as a significant predictor of anxiety, being female associated with higher anxiety.

For depression: This hypothesis was not supported, that is none of the socio-demographic variables were related with depression.

For total score of psychological distress: This hypothesis was not supported. None of the socio-demographic variables were related to the total score of psychological distress.

For PTG: This hypothesis was partially supported. That is gender was found to be associated with PTG total score and PTG “changes in self perception” scores,

females reporting more PTG. Age predicted PTG 'changes in phiolosophy of life'. Younger patients reported more PTG.

In sum, education, income and marital status did not predict psychological distress and PTG. This may be related to the lack of variation in these variables in the current study, RA patients in the present study were very similar in these characteristics. In other words, due to the lack of variance in socio-demographic variables in this sample, expected differences might not have appeared. In future studies it will be good to take patients from different SES levels in order to examine this relationship. The results showed that gender is an important variable for anxiey and that female RA patients experience more anxiety.

> **Hypothesis 2:** Illness related variables such as fatique, acuteness of disease, impact of illness on daily activities and perceived disease severity will be related to higher levels of PTG and psychological distress.

For anxiety: This hypothesis was partially supported in the sense that fatigue level predicted anxiety. That is, the higher the level of fatigue the higher was the level of patients' anxiety.

For depression: Only the impact of disease on daily activities predicted depression. That is higher level of impact of disease on daily activities increased the level of patients' depression.

For total score of psychological distress: This hypothesis was not supported, none of the illness related variables were related to the total score of psychological distress.

For PTG: Perceived disease severity related positively to total score of PTG and PTG "changes in self perception". Patients with high-perceived disease severity experienced higher total score of PTG and PTG "changes in self perception". Acuteness of disease predicted PTG 'changes in relationship with others'. That is, the higher the level of perception of acuteness of disease, the higher 'Changes in relationship with others' was.

In sum, majority of the illness related variables were related with psychological distress or PTG.

Hypothesis 3: Resources such as religiousness, perceived social support and ways of coping and arthritis self-efficacy would influence PTG and psychological distress (anxiety and depression).

Hypothesis 3.1: Patients with higher resource loss are expected to have higher PTG and higher psychological distress (anxiety and depression).

For anxiety: Hypothesis 3.1 was supported. Resource loss predicted anxiety. That is, patients with higher levels of resource losses experienced higher levels of anxiety.

For depression: Resource loss predicted depression that is patients with higher levels of resource losses experienced higher levels of depression.

For total score of psychological distress: Resource loss predicted total score of psychological distress. That is a patient with higher levels of resource losses experienced higher levels of psychological distress.

For PTG: This hypothesis was not supported. Resource loss did not predict PTG.

In sum, psychological distress increased due to resource loss. However, resource loss did not relate to posttraumatic growth.

Hypothesis 3.2: Patients with higher levels of social support are expected to have higher PTG and lower psychological distress (anxiety and depression).

For anxiety: This hypothesis was supported. Perceived social support predicted anxiety. That is, patients with higher level of perceived social support reported lower anxiety.

For depression: This hypothesis was not supported. Perceived social support did not predict depression.

For total score of psychological distress: Perceived social support did not predict psychological distress either.

For PTG: Perceived social support predicted both the total and three subscales of PTG. That is, patients with higher levels of perceived social support reported higher levels of PTG.

Hypothesis 3.3: Patients with higher levels of religiousness are expected to have higher PTG and lower psychological distress (anxiety and depression).

Hypothesis 3.3 was not supported since religiousness did not predict either psychological distress (anxiety and depression) or PTG. This was an unexpected result. The explanation for this finding is that all patients reported themselves as highly religious people. Therefore, there was no variance in religiousness, which may have impeded religiousness showing a significant predictor of psychological distress and PTG.

Hypothesis 3.4: Patients who use of problem-focused coping more are expected to have higher PTG and lower psychological distress (anxiety and depression).

For anxiety: This hypothesis was not supported. That is problem solving did not predict anxiety.

For depression: Problem-solving coping predicted depression. Problem-solving coping leads to lower depression.

For total score of psychological distress: Problem-solving coping predicted total score of psychological distress. That is a patient with who used problem-focused coping more experienced lower psychological distress.

For PTG: Problem-solving coping predicted the total and the three subscales of PTG. That is, problem-solving coping leads to higher PTG.

Hypothesis 3.5: Patients with higher levels of arthritis self efficacy are expected to have higher PTG and lower psychological distress (anxiety and depression).

For anxiety: Arthritis self-efficacy did not predict anxiety. However, there were significant zero order negative correlations between anxiety and Arthritis self-efficacy which provided some evidence for the relationship between arthritis self efficacy and anxiety.

For depression: This hypothesis was supported. Arthritis self-efficacy predicted depression. Patients with higher levels of arthritis self-efficacy reported lower depression.

For total score of psychological distress: Hypothesis was not supported. Arthritis self-efficacy did not predict psychological distress.

For PTG: The hypothesis was not supported. Arthritis self-efficacy did not predict either the total or the subscales of PTG.

4.7 General Overview

Certain socio-demographic variables were found to be predictors of psychological distress and PTG. Apart from gender and age (age was also only related to PTG 'changes in phiolosophy of life'), none of the socio-demographic variables were related to psychological distress and PTG in the regression analyses. Although gender was found as a predictor of anxiety, total score of PTG and PTG 'changes in self perception', the effects of gender on these variables need to discussed cautiously due to insuffient numbers of males in the present study.

Most of the illness related variables were found to be related to psychological distress and PTG. The relationship between illness related variables and psychological outcomes was in the expected direction.

There was no relationship between serological markers or clinical indices of disease activity and psychological distress. This finding was also similar with Sharpe et al.'s (2001) study, which investigated the course and predictors of depression in RA patients. They found that ESR and C-reactive protein were not related to mood.

There is no obvious explanation for this finding of the present study. However, these results point out that, rather than the objective indices, how the illness is perceived by the patients seems to be more important in influencing psychological outcomes.

Resource loss was found to be related to psychological disress such as anxiety, depression and total score of psychological distress. The relationships between resource loss and psychological distress are consistent with the propositions of COR theory. Therefore, these findings from RA patients provided support for the COR theory.

Emotion focused coping, such as helplessness coping, increased anxiety and the total score of psychological distress whereas, problem focussed coping, such as problem solving coping, decreased depression and the total score of psychological distress. In addition, use of problem solving coping increased both the total score and three subscales of PTG. These findings were also in expected directions and were also consistent with the existing literature. Coping behaviors were also accepted as resources and also these resources were found to be significantly related to psychological outcomes. Therefore, these findings were also accepted as a support for the propositions of COR theory.

Perceived social support decreased anxiety whereas it increased the total score and three subscale scores of PTG. According to the COR theory, social resources (social support) play a significant role in psychological distress. Therefore, these findings were also consistent with the propositions of COR theory. Perceived social support is an important resource. The mean score of perceived social support was found to be 61.39 for RA patients in the present sample. Considering that 84 is

the maximum score from MSPSS, a mean score of 61. 39 showed that the present sample perceived relatively high levels of perceived social support.

Arthritis self-efficacy (ASE) was found to be related to only depression. That is, higher levels of ASE decreased the depression levels of RA patients. Interestingly, ASE was not found to be related to anxiety and general distress (total score of HADS). The possible explanation for this finding is that although ASE decreased depression level of RA patients it may not affect the experience of anxiety. Since RA is a chronic and deteriorating disease despite certain level of arthritis self efficacy these patients may still experience anxiety due to the uncertainty of the future of the disease and the possible demands it may pose for the person.

Although RA patients reported several sentences about the role of religiousness in their adjustment during administration of the scales, it is interesting to note that religiousness was not related to psychological distress or PTG. This finding was inconsistent with Park (1998), Park & Fenster (2004), and Elçi (2005) studies. They reported that individuals with strong religious faith experience more positive aspects of the event and experience PTG. A lack of association between religiousness and psychological outcomes in the present study may serve an example of the complexity of the religiousness construct. In the present study only the behavioral part of religiousness was measured, however other aspects of religiousness, which are feelings, beliefs, and knowledge and also intrinsic and extrinsic religiousness should be measured. In addition, the sample should be heterogeneous in religiousness in order to examine the effects of religiousness on psychological outcomes.

4.8 Limitations of the Study

Although the findings of the present study contribute to the existing literature and provide support for the COR theory, the study has several limitations. Therefore, these limitations warrant discussion. Firstly, a cross-sectional design was used in the current study. Hovewer, in order to examine the exact relationships between variables longitudinal design was necessary. However, due to practical difficulties this was not achieved. Therefore, the results need to be interpreted coutiously.

Secondly, the present study had relatively fewer male RA patients. This might have caused limitations in exploring gender differences. The study included 99 female and only 18 male patients. The proportion of male to female patients was low and this is not the exact proportion of RA patients in clinics. Thus, the study needs to be replicated with more representative proportions of males and females.

Thirdly, religiousness was measured by only a behavior scale of religiousness. However, owing to negative skewness, it seems that there is a bias on that scale which may be a result of social desirability. Therefore, alternative measurement tools which examine this variable in detail should be used in further studies.

Finally, selection of patients from only one hospital (a state hospital) led to problems of the representativeness of this sample for other RA patients. The present sample may not be representative of most of the RA patients. Since the majority of the present sample had low incomes and low educational level. The present sample was composed of RA patients not showing great variation in regards to gender, income, marital status, education level and employment status. This homogeneity

may have hindered the investigation of the effects of these variables on psychological distress and PTG levels. These variables, namely, gender, income, education level and marital status may all have an important impact on RA patients' adjustment. Therefore, the selection of patients' from only one hospital brings about generalizibility problems of the present findings to RA patients from other socio-economic groups.

4.9 Clinical Implications

This study is the first comprehensive study to examine both psychological distress and posttraumatic growth (PTG) at the same time in a sample of Turkish RA patients. Thus, it can provide valuable guidelines for psychological support services for RA patients. The results showed that RA patients experienced considerable psychological distress. It was also found that resources, especially social support and problem-focused coping facilitate adjustment whereas losses of resources have a crucial detrimental role in the psychological adjustment of RA patients.

The present study also demonstrated that although, RA patient experience psychological distress, they also experience moderate levels of PTG, which seems to be facilitated with certain resources, like social support. Therefore, clinicians should not overlook positive aspects and should try to facilitate growth. In addition, this study revealed the variables related to PTG levels of RA patients. Therefore, psychologist should focus on and facilitate these variables such as perceived social support and problem solving coping to foster PTG. In order to increase social support level of RA patients, clinicians should work with families. The importance

of social support in the adjustment of RA patients needs to be underlined in family psychoeducation programs.

The findings of the current study may be utilized by clinicians (psychologist or psychiatrists) in their support work both with patients and their families. They need to be aware of the possibility of psychological distress. Therefore, it is important that all RA patients should be screened to evaluate their psychological adjustment on several occasions. Symptoms of psychological distress should be identified and support to decrease distress needs to be given immediately. Clinicians should make interventions to decrease depression and anxiety often associated with resource loss in RA patients. Especially, the perception of resource loss of RA patients should be decreased. Training in active problem solving skills and skills to combat helplessness may empower RA patients and thus may decrease psychological distress.

The findings indicated that some RA patients have pessimistic thoughts about the future of their disease. These thoughts may be influenced by not having suffient information about their illness. Physicans can be informed about this and asked to give information to their patients about the future course of their illness. In addition, these negative thoughts may be related to not taking any support from hospital staff. Therefore, clinicans may need to be aware of psychological outcomes of having RA. Psychological services should give psychoeducation about the illness, support and processing of information, sharing emotions. It is very crucial not to only focus on the physical aspect of the illness and to also provide psychosocial support programs targeting both the patients and also their relatives. RA is a deteriorating illness and the symptoms and couse of the illness seems to create anxiety, which is likely to be

related to the perception of threat for the future. Thus, all these aspects need to be addressed con-jointly with the physical treatment.

The finding that being a female predicts anxiety and PTG scores is very important. Clinicians need to be supportive and give special attention to female RA patients. RA may especially inhibit their functioning in household duties and this threatens their self-esteem. Therefore, it is important to give them opportunities to discuss their anxieties and to give them psychological support.

The finding that, illness related variables such as fatigue, the impact of illness on daily activities, perceived diease severity, and acuteness of disease predicts psychological distress and PTG are also very important. Clinicians should identify perceptions of RA patients about their illness and change negative perceptions related to illness related variables. This may be accomplished by providing systematic information about the illness and its treatment.

The results showed that perceived social support is related to anxiety and PTG. It was found that higher levels of perceived social support related to having less anxiety, and higher levels of PTG. Therefore, clinicians should provide more support to RA patients, give more information to relatives about the effects of social support on psychological outcomes and use interventions to increase perceived social support level of RA patients.

This study indicated that RA patients used several coping strategies with their life problems. Some of them were useful, but some of them were detrimental for their adjustment. The finding showing that the use of problem solving coping lowers depression, general psychological distress and increases perceived growth point out that clinicians should identify coping skills of RA patients. Then, interventions

should focus on increasing problem solving coping to decrease psychological distress and to foster PTG and to decrease helplessness.

A higher level of arthritis self-efficacy was found to be related with lower levels of depression. The present finding suggests that interventions, which aim to increase the specific coping strategies with RA related difficulties are necessary in combating depression.

Lastly, physicians' awareness of the possibility of psychological distress and the importance of support seems to be especially important for reducing psychological distress and in fostering PTG in RA patients. Therefore, especially phsicians should be encouraged to offer more support to their patients. The psychological factors related to psychological distress and PTG need to be incorporated into the educational curriculum of phsicians. They need to be given information on the psychological experiences of their patients and trained in how to support their patients.

4.10 Directions for Future Studies

In the present study only gender, among all the socio-demographic variables appeared as a significant predictor of psychological distress and PTG. In the present study, most of the patients had low income and education and majority were married. As a result, the participants of the study had life conditions characterized by economic difficulties, which are likelt to lead to psychological distress. Therefore, in order to clarify the real role of resources in RA patients' life patients from high socio-economic status should also be included in the sample. Therefore, future

studies should investigate the role of socio-demographic variables in a more diverse sample of RA patients. This can be achieved by sampling from different hospitals serving various socio-economic levels.

It was observed that many of the RA patients in the present sample had several stressful events in their lives apart from having RA. In future studies occurrence of other stressful event should be enquired and examined in dept to figure out the relationship between other stressful events for RA patients and psychological distress and PTG.

In the present study religiousness has not been found to be related to psychological distress. However, previous studies noted a strong relationship between religiousness and psychological distress. The present sample reported to having high religiousness. In future studies the relationship between religiousness and psychological distress need to be examined in RA patients by including patients from different levels of religiousness.

The current study did not investigate the needs and characteristics of relatives/caregivers. In future studies, the relationship between relative variables and patients adjustment variables should be examined, in order to identify relatives' impact on the psychological distress of patients.

Although, the current study examined the predictor role of total score of perceived social support on psychological distress and PTG, it did not include different types of social support. Since RA is a progressive illness, it requires different types of support in various phases. These types of social support may need further examination. Therefore, it will be valuable to examine the role of different types of social support on psychological adjustment of RA patients in future studies.

The present study can be replicated with different comparison groups such as patients with other chronic diseases. In order to figure out their psychological distress and PTG levels, understand relationships between resources and psychological distress and to facilitate posttraumatic growth. Comparison groups may provide normative data to compare the results of psychological distress and PTG level of RA patients.

Finally, longitidunal studies are needed to investigate the exact relationship between variables that were examined in the current study.

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APPENDICES

APPENDIX A

PRELIMINARY STUDY

Overview

Preliminary study was conducted to test the reliability and to examine the factors of some of the scales, which were used in the main study. In addition, preliminary study was conducted in order to identify problematic items and scales and to replace them with new ones.

Participants

Participants of the preliminary study were 49 RA patients who applied to Ankara Numune Egitim ve Araştırma Hastanesi (ANEAH) and ODTÜ Sağlık ve Rehberlik merkezi. Thirty eight (76.6%) of the patients from physical medicine and rehabilitation clinic of ANEAH (out patients) 4 (8.2%) of the patients were hospitalized at the same clinic. 5 (10.2%) of the patients from rheumatology clinic (hospitalized patients) and 2 (4.1%) of the patients from ODTÜ Saglık ve Rehberlik merkezi (outpatients). Only 1 patient could not complete all of the scales. The sample consisted of 35 women and 14 men. Patients' age ranged between 20 to 70, with a mean of 45.84 (SD = 13.11). Some Sociodemographic and illness related variables of the sample are presented in Table 1.

Table 1. *Characteristics of the pilot study sample*

Variables	Number (Percentages)	Mean	SD	Range
Marital status				
Single	5 (10.2)			
Married	40 (81.6)			
Divorced	3 (6.1)			
Widow/widower	2(5)			
Education (in years)		5	3.82	0-15
Child status				1-8
Having children	38 (95)			
Have not child	2 (5)			
Employment				
Unemployed	34 (69.4)			
Employed	15 (30.6)			
Monthly income				
Less than 500 YTL	25 (51)			
500-1000 YTL	19 (38.8)			
1000-2000 YTL	4 (8.2)			
2000 YTL and above	1 (2)			
Money lost	37 (75.5)			
Living place				
Big cities	36 (73.5)			
Cities	8(16.3)			
Towns	3(61.1)			
Villages	2 (4.1)			
Household member				
Living with family	48			1-12

Instruments

Demographic and Illness Related Information Form and seven self-report questionnaires were administered (see method section for detailed information). (Appendix B presents all questionnaires)

Procedure

The scales were administered to patients who received treatment from two different hospitals. Before administration approval from two hospitals were received. The investigator identified RA patients by obtaining information from medical files and from doctors. Then, the investigator and 2 undergraduate psychology students informed the patients about the aim of the study and obtained informed consent from patients. Before the administration the main investigator trained the psychology students on the application of the scales.

Before construction of packages of scales, qualitative methodology was use to explore the experience of patients and their families. In order to assess the impact of chronic debilitating disease like RA on the patients' life (relationships, daily living activities, work, marriage, sexual activity) interview with 7 RA patients and 2 of relatives of RA patients were conducted. The aims of the semi-structured interviews were to choose suitable scales for the present study. Especially, interviews were completed in approximately 30-45 minutes. The disabling effect of RA includes problems in seven domains. These are problems related with personal hygiene (such as taking bath, going to the toilet, wearing and take out clothes, hair brushing), physical problems (such as pain, difficulties in sleeping, decreased mobility, difficulties in walking, difficulties in descend stairs, difficulties in stand up

from armchair without physical support, tiredness, weakness, reduced energy, loss of functional abilities), problems in housework (such as difficulties in cleaning, washing dishes, washing clothes, cooking, difficulties in holding pots and pans, difficulties to roll out dough), difficulties in the following of social activities (due to problems in walking, eating, worry about other peoples' questions about their illness, difficulties to get on bus), difficulties in sexual activities (inhibited desire, pain), emotional problems (such as feeling of crying, nervousness, withdrawal, out of sorts, appetite, insomnia, depressive feelings, anxiety, reluctance), and difficulties in doing hobbies (such as knitting, gardening).

The interviews results with relatives of RA patients revealed that RA causes various changes in patients' relatives' life. One of the relatives noted that he changed job to pay attention the needs of RA patients. They also experience emotional problems such as helplessness, sadness, worry, uneasiness, and self-blaming. They also reported that they couldn't do outdoors activities together with patients (decreased involvement with family). One of the patients relative also stated that caring needs of patients leads to problems in her son and bride. It was also asked to relative whether any positive sides to be a relative of RA patients. They indicated that they began to have more understanding towards disabled people.

After examination of interviews results to construct Resource Loss Scale, COR-E scale of Hobfoll (Hobfoll, Lilly, & Jackson, cited in Freedy & Hobfoll, 1994) was also examined. Then Resource Loss Scale was developed.

Statistical Analysis

Data was analyzed by using the appropriate programmes of the Statistical Package for the Social Science (SPSS), (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975). After conducting Factor Analyses with the measure of Religiousness Scale (RS), Multidimensional Scale of Perceived Social Support (MSPSS), and with the measure of Hospital Anxiety and Depression Scale (HADS), a correlation matrix was run for all variables. Reliability analyses were conducted for all measures. Lastly, total score of all scales were obtained.

RESULTS

Socio-demographic Variables

Table 1 presents socio-demographic characteristics of the sample

35 (71.4%) of the participants were female, 14 (28.6%) of the participants were male. The mean age of the participants was 45.84 (Minimum age = 20, Maximum age = 70, SD = 13.11). Among the participants 8 (16.3%) were illiterate, 6 (12.2%) literate, 24 (4%) graduated from primary school, 2 (4.1%) graduated from secondary school, 8 (16.3%) graduated from high school, 1 (2%) of participants graduated from university.

Illness Related Variables

The mean duration of RA was 10.10 years (Min = 1 year, Max = 55 years), 43 (87.8%) of the participants were hospitalized before. 7 (14.3%) of the participants were operated due to complications of RA. 6 (12.2%) of the participants have a psychiatric problems. 3 (6.1%) of the participants have used psychotropic drugs.

Current pain level was measured by Visual Analog Scale (VAS/10 cm). Mean of VAS was 4.94 (SD = 3.32, Min = 0, Max = 10).

The current fatigue level was also measured by VAS. The mean of fatigue level was 5.24 (SD = 3.35, Min = 0, Max = 10).

Level of activity of the disease was measured by one question, 'How active/acute is your disease right now?' (1 = none, 2 = mild, 3 = moderate, 4 = great 5 = very great). The mean level of disease activity was 2.94 (SD = 1.24, Min = 1, Max = 5).

The current function level of patients was measured by a question ' How much influential is your disease on your daily activities recently' (1 = none, 5 = very great). The mean of current function was 3.08 (SD = 1.40, Min = 1, Max = 5)

The severity of the illness was measured by 4 questions. They are related with arthritis pain and they measured frequency of pain, frequency of stiffness, severity of pain during last month (1= every day, 5= never). The mean of severity is 12.83 (SD = 4.60, Min = 4, Max =20).

Resource Loss Scale (RLS)

Resource loss scores were obtained by summing up the responses to the 20 items of the RLS (M = 41.39, SD = 17.42, Min = 20, Max = 89). Cronbach alpha reliability of RLS scale was .91, considering that 100 is the maximum possible score that can be obtained from the RLS, a mean score of 41.39 showed that the sample had less than moderate levels of resource loss. After the results of preliminary study 3 item were added RLS and 23 item RLS was used in main study

Religiousness Scale (RS)

Religiousness Behavior Scale (Yaparel, 1996) was used, by adding one item which is 'I believe that I am a religious person'. Factor analysis was conducted for RS. The initial factor analysis of the responses to the RS, employing principle components, varimax rotation, with eigenvalue of 1.00 as the criterion yielded one factor, explaining 76.74% of the total variation. Factor loading ranged from .71 to .79. Subsequently, a total RS score was obtained simply by summing up the responses to the eleven items of RS (M = 48.81, SD = 10.43, Min = 17, Max = 55). Cronbach alpha reliability of the scale was high (.97), considering that 55 is the maximum possible score that can be obtained from the RS, a mean score of 48.81 showed that the patients reported themselves as highly religious individuals.

The Arthritis Self Efficacy Scale (ASES)

Although ASES scale has 3 subscales, which are self-efficacy pain scale, self-efficacy function scale, and self-efficacy other symptoms scale, for the preliminary study factor analysis was not employed due to insufficient number of participants.

ASES scores were obtained simply by summing up the responses to the 19 items of the ASES (M = 60.61, SD = 17.06, Min = 24, Max = 88). Cronbach alpha reliability of ASES was .92, considering that 95 is the maximum possible score that can be obtained from the ASES, a mean score of 60.61 revealed that the sample reported relatively high levels of arthritis self-efficacy. Although, original ASES is 20 items, one item was omitted in preliminary study due to problems in understanding of item. However, in main study 20th item was added.

Multidimensional Scale of Perceived Social Support (MSPSS)

Initially a factor analysis was conducted for the MSPSS, which yielded in 3 factors, totally explaining 81.47% of the variance. These were social support from family, friends and significant others. Since there were no specific hypothesis for different types of support, a total social support score was computed. A total perceived social support score was obtained by summing up the responses to the items of MSPSS (M = 64.90, SD = 16.69, Min = 18, Max = 84). Cronbach alpha reliability of the scale was .91, considering that 84 is the maximum possible score that can be obtained from the MSPSS, a mean score of 64.90 revealed that the sample perceived relatively high levels of social support.

Ways of Coping Inventory (WCI)

Ways of Coping score were obtained simply by summing up the responses to the 42 items of WCI. (M = 102.25, SD = 7.52, Min = 86, Max = 121). Cronbach alpha reliability of the scale was .74. Factor analysis was not employed due to insufficient number of cases in preliminary study.

Post-Traumatic Growth Inventory (PTG)

A total PTG score was obtained simply by summing up the responses to the 21 items of PTGI (M = 50.25, SD = 24.29, Min = 3, Max = 96). Cronbach alpha reliability of the scale was high (.92) considering that 105 is the maximum possible score that can be obtained from the PTGI, a mean score of 50.25 showed that sample experienced moderate levels of posttraumatic growth.

Hospital Anxiety and Depression Scale (HADS)

The initial factor analysis of the responses to the HADS, employing principal components, oblique rotation with the eigenvalue of 1.00 as the criterion yielded four factors explaining 66.31 percent of total variation. Oblique rotation was preferred due to expected high correlation between factors. Subsequently, factor scores for anxiety and depression symptoms were calculated. Depression items are 2, 4, 6, 8, 10, 12, and 14. Anxiety items are 1, 3, 5, 7, 9, 11, and 13. Items 2, 4, 7, 9, 12, and 14 scored as a= 0, b= 1, c= 2, d= 3; whereas items 1, 3, 5, 6, 8, 10, 11 and 13 have reverse coding as a=3, b=2, c=1, d= 0.

A total depression score was obtained simply by summing up the responses to the 7 items of HADS (M = 9.33, SD = 4.96, Min = 0, Max = 19). Cronbach alpha reliability of the scale was .77. Aydemir (1997) reported cut off point for depression scale as 7 and also possible score that can be obtained from depression scale was 21. Thus, a mean score of 9.33 revealed that sample experienced mild level of depression.

A total anxiety score was obtained simply by summing up the responses to the 7 items of HADS (M = 8,69, SD = 5.56, Min = 0, Max = 21). Cronbach alpha reliability of the scale was .82. Aydemir (1997) reported that cut off point for anxiety scale as 10 and also possible score that can be obtained from anxiety scale was 21. Thus, a mean of 8,69 revealed that the sample reported anxiety symptoms when compared to the results with Aydemir (1997) study. Aydemir (1997) reported mean scores of depression in physically ill patients as 8.04 (SD= 4.76) and mean score of anxiety as 9.35 (SD= 5.20). Therefore, it was concluded that RA patients

experienced higher level of anxiety and depressive symptoms than other Turkish patients group.

Correlations among study variables

Table 2, presents the correlations among study variables. As can be seen from table 2, mediator variable Arthritis self efficacy was positively related with social support, whereas, Arthritis self efficacy were negatively related with age, number of hospitalization, having other disease, severity of disease, pain, fatigue, acute level of the disease, influence of disease on daily life, resource loss, anxiety, depression and ways of coping. Posttraumatic growth was negatively related with age, child number, rheumatoid arthritis duration, and ESR, whereas positively related with social support. Anxiety was negatively related with marital status (1= single, 2= married), arthritis self-efficacy and social support whereas positively related with having other disease, pain, fatigue, acute level of the disease, resource loss, and depression. Finally, depression was negatively related with marital status (1= single, 2= married), arthritis self efficacy and social support whereas, positively related with severity of disease, duration of disease, pain, fatigue, acute level of the disease, influence of disease on daily life and resource loss.

Conclusion

The results of preliminary study revealed that all scales have good psychometric properties to use in main study.

Table 2.
Pearson correlations of medical history and demographic variables and other study variables

	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Gender	-.35*	.47**	-.17	.28	.00	-.02	-.22	-.25	.21	-.04	-.08	.11	-.12
2. Age		-.29*	.27	.38*	.27	.35*	.09	.32	-.16	.20	-.35*	-.31*	-.16
3. Income			.08	-.35*	-.20	.00	-.10	-.31*	-.32*	-.31*	.13	.18	.07
4. Marital Status				.20	-.03	.05	-.29*	.20	-.30*	-.20	-.03	.16	.39**
5. Child Number					.22	.25	.25	.30	.20	.31*	-.33*	-.30	-.08
6. Pain Severity						.15	.41**	.17	.52**	.46**	-.13	-.56**	-.19
7. Duration							.19	.08	.05	.06	-.30*	-.26	-.22
8. Other illness								.33*	.27	.26	-.07	-.41**	-.35*
9. ESR									.05	.17	-.33*	-.25	.07
10. Subjective health										.73**	-.06	-.69**	-.25
11. Pain											-11	-.69**	-.34*
12. Growth												.23	.42**
13. ASES													.37**
14. Social Sup.													

* Correlation is significant at the 0.05 level (2-tailed) ** Correlation is significant at the 0.01 level (2-tailed)

Table 2 *continued*

	15	16	17	18	19
1. Gender	.10	-.22	-.16	-.03	-.13
2. Age	-.03	.23	-.09	.22	.22
3. Income	-.01	-.43**	-.21	-.28	-.33*
4. Marital Status	-.21	-.04	-.34*	-.33	-.06
5. Child Number	-.08	.28	-.11	.20	-.09
6. Pain Severity	.50**	.08	.25	.41**	.25
7. Duration	.11	.16	-.09	.30*	-.07
8. Other illness	.26	.26	.44**	.29	.17
9. ESR	-.03	.18	-.05	-.16	.29
10. Subjective health	.52**	.34	.48**	.54**	.34*
11. Pain	.54**	.43**	.53**	.33**	.11
12. Growth	-.03	.14	.08	-.09	.08
13. ASES	-.61**	-.11	-.48**	-.52**	-.29*
14. Social Sup.	-.40**	-.02	-.36*	-.46**	.18
15. Res. Loss		-.06	-.44**	.49**	.02
16. Religion			.16	.16	.34*
17. Anxiety				.53**	.24
18. Depression					.01
19. WCI					

* Correlation is significant at the 0.05 level (2-tailed) ** Correlation is significant at the 0.01 level (2-tailed)

APPENDIX B: QUESTIONNAIRES

DEMOGRAPHIC AND ILLNESS RELATED INFORMATION FORM

Açıklama,

Romatoid Artrit gibi kronik bir hastalığının olması insanları psikolojik olarak derinden etkileyebilmektedir. Bu çalışmada Romatoid Artrit hastalarının yaşayabilecekleri olası sıkıntılar, sıkıntıların nedenleri ve bunları azaltmak ile ilgili bilgiler toplamayı amaçlamaktayız. Soruların, doğru ya da yanlış cevapları yoktur. Sorulara samimi cevaplar vermeniz araştırmadan elde edilen sonuçların geçerli ve güvenilir olmasını sağlayacaktır. Vereceğiniz tüm bilgiler saklı tutulacaktır. Bütün cevaplar grup halinde araştırma amacıyla değerlendirileceği için isim vermeniz gerekmemektedir. Araştırmaya katılmak gönüllüdür. Aşağıdaki soruları cevaplayarak araştırmaya katılacağınızı umuyoruz.

Yardımlarınız için şimdiden çok teşekkür ederiz

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KİŞİSEL BİLGİLER

1. Cinsiyetiniz: ___Kadın ___Erkek

2. Yaşınız:

3. Eğitim düzeyiniz (son okuduğunuz sınıfı düşünerek cevaplayınız)

___ Okuma-yazma bilmiyor

___ Okur-yazar

___ İlkokul

___ Ortaokul

___ Lise

___ Üniversite

___ Üniversite üzeri

4. Medeni durumunuz

___ Bekar

___ Evli

___ Boşanmış

___ Eşi vefat etmiş

5. Çocuğunuz var mı?

___ Hayır

___ Evet ise kaç tane veyaşları……

6. Mesleğiniz nedir?……

7. Halen çalışıyor musunuz?

___ Hayır Ne zamandır çalışmıyorsunuz? (ay olarak belirtiniz)…

___Evet Ne iş yapıyorsunuz?……

8. Ailenizin toplam aylık gelir düzeyi yaklaşık ne kadardır?

___500 YTL'den az ___500 - 1000 YTL ___1 000 – 2000 YTL ___2 000 YTL ve üzeri

9. Yaşadığınız yer:

___ Büyük şehir (İstanbul, Ankara, İzmir) ___Şehir ___Kasaba ___ Köy

10. Evde beraber yaşadığınız kişiler…….……

11. Herhangi bir sağlık güvenceniz var mı?

___ Hayır

___ Evet (belirtiniz) ___SSK ___Emekli Sandığı ___Bağ –kur

___Diğer

HASTALIKLA İLGİLİ BİLGİLER

12. Kaç yıldır RA (romatoid artrit)'iniz var? …….

13. Halen kullandığınız ilaçlar neler?

..……..

14. Romatoid artritiniz nedeniyle hiç hastaneye yattınız mı?

___ Hayır

___ Evet ise Kaç kere yattınız……..

15. Romatoid artrit dışında halen başka bir hastalığınız var mı?

___ Hayır

___ Evet

Hastalığınız nedir?…….

Ne zamandan beri devam ediyor?…….

16. Romatoid artrit nedeniyle hiç ameliyat oldunuz mu?

___ Hayır

___ Evet

Ne ameliyatı oldunuz?……

17. Bugüne kadar psikiyatrik bir tanı aldınız mı?

___ Hayır

___ Evet

(belirtiniz)……

18. Şu an psikiyatrik bir ilaç kullanıyor musunuz?

___Hayır

___Evet (belirtiniz)……...……

19. Şu anki ağrı düzeyinizi aşağıdaki sayılar üzerinde uygun yeri işaretliyerek gösterir misiniz?

Hiç ağrım yok 0 1 2 3 4 5 6 7 8 9 10 Çok fazla

20. Şu anki yorgunluk düzeyinizi aşağıdaki sayılar üzerinde uygun yeri işaretliyerek gösterir misiniz?

Hiç yorgun değilim 0 1 2 3 4 5 6 7 8 9 10 Aşırı yorgunum

21. Hastaliğiniz şu an ne kadar aktif/alevli?

___ Hiç ___ Biraz ___Orta ___ Fazla ___ Çok Fazla

22. Hastalığınız son günlerde günlük aktivitelerinizi (giyinme, temizlik, ev işleri) yapmanızı ne kadar etkiliyor?

___ Hiç ___ Biraz ___Orta ___ Fazla ___ Çok Fazla

Aşağıdaki sorular artrit ağrısı ile ilgilidir.

Geçen Ay Boyunca

	Her gün	**Çoğu gün**	**Bazı günler**	**Çok az gün**	**Hiç bir gün**
1. Artritinize bağlı şiddetli ağrınız hangi sıklıkta oldu?	___	___	___	___	__
2. Aynı anda iki veya daha fazla ekleminizde ağrı hangi sıklıkta oldu?	___	___	___	___	__
3. Sabah uyandığınızda bir saat veya daha uzun süren sabah tutukluğu hangi sıklıkta oldu?	___	___	___	___	__
4. Uyumanızı güçleştirecek kadar ağrı hangi sıklıkta oldu?	___	___	___	___	__

* Hastalığınızın önümüzdeki 5-10 yıl içerisinde nasıl bir gelişme göstereceğini düşünüyorsunuz? _____

_____

_____

_____

Lütfen aşağıdakileri doldurmayınız

Eritrosit sedimantasyon hızı……..

CRP……

Rheumatoid Factor…….

ARTHRITIS SELF EFFICACY SCALE (ASES)

Aşağıdaki her bir soruda yer alan işleri, şu an düzenli olarak yapabilmekten ne kadar emin olduğunuza karşılık gelen sayıyı lütfen daire içine alınız.

	Hiç emin değilim				**Çok eminim**
1.Ağrınızı büyük ölçüde azaltabileceğinizden ne kadar eminsiniz?	1	2	3	4	5
2. Günlük işlerinizin çoğuna devam edebileceğinizden ne kadar eminsiniz?	1	2	3	4	5
3. Artrit ağrılarınızın uykunuzu bölmesini engelleyebileceğinizden ne kadar eminsiniz?	1	2	3	4	5
4. Fazladan ilaç almanın dışında başka yollarla artrit ağrınızı az ya da orta düzeyde azaltabileceğinizden ne kadar eminsiniz?	1	2	3	4	5
5. Fazladan ilaç almanın dışında başka yollarla artrit ağrılarınızı oldukça çok azaltabileceğinizden ne kadar eminsiniz?	1	2	3	4	5
6. Düz bir zeminde 30 metreyi 20 saniyede yürüyebileceğinizden ne kadar eminsiniz?	1	2	3	4	5
7.10 basamağı 7 saniyede inebileceğinizden ne kadar eminsiniz?	1	2	3	4	5
8. Kolçakları olmayan bir sandalyeden ellerinizden destek almadan çabucak kalkabileceğinizden ne kadar eminsiniz?	1	2	3	4	5
9. Orta büyüklükteki 3 düğmeyi 12 saniyede ilikleyip sonra açabileceğinizden ne kadar eminsiniz?	1	2	3	4	5

10. İki lokma büyüklüğündeki bir eti çatal ve bıçakla 8 saniyede kesebileceğinizden ne kadar eminsiniz?	1	2	3	4	5
11. Evdeki muslukları rahatça açıp kapayabileceğinizden ne kadar eminsiniz?	1	2	3	4	5
12. Sırtınızın üst kısmını sağ ve sol elinizle kaşıyabileceğinizden ne kadar eminsiniz?	1	2	3	4	5
13. Fiziksel bir destek veya başka birinin yardımı olmadan arabanın yolcu tarafından inip binebileceğinizden ne kadar eminsiniz?	1	2	3	4	5
14. Önden düğmeli uzun kollu bir gömleği ya da bluzu 8 saniyede (iliklemeden) giyebileceğinizden ne kadar eminsiniz?	1	2	3	4	5
15. Yorgunluğunuzu kontrol edebileceğinizden ne kadar eminsiniz?	1	2	3	4	5
16. Artritinizi daha kötüleştirmeden etkin olacak şekilde günlük işlerinizi yapabileceğinizden ne kadar eminsiniz?	1	2	3	4	5
17. Kendinizi üzgün hissettiğinizde daha iyi hissetmek için birşeyler yapabileceğinizden ne kadar eminsiniz?	1	2	3	4	5
18. Sizin gibi artritli olan diğer insanlarla kıyasladığınızda, günlük işleriniz sırasındaki artrit ağrılarınızla başedebileceğinizden ne kadar eminsiniz?	1	2	3	4	5
19. Artrit belirtilerine rağmen hoşlandığınız şeyleri yapabileceğinizden ne kadar eminsiniz?	1	2	3	4	5
20. Artritin yaşamınıza getirdiği engellerle başa çıkabileceğinizden ne kadar eminsiniz?	1	2	3	4	5

MULTIDIMENSIONAL SCALE OF PERCEIVED SOCIAL SUPPORT (MSPSS)

Aşağıda 12 cümle ve her bir cümle altında da cevaplarınızı işaretlemeniz için 1'den 7'ye kadar rakamlar verilmiştir. Her cümlede söylenenin **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 birine bir işaret** koyarak cevaplarınızı veriniz. Lütfen **hiçbir cümleyi cevapsız bırakmayınız.** Sizce doğruya en yakın olan rakamı işaretleyiniz.

1. Ailem (örneğin, annem, babam, eşim, çocuklarım, kardeşlerim) bana gerçekten yardımcı olmaya çalışır.

Kesinlikle hayır	1	2	3	4	5	6	7	**Kesinlikle evet**

2. İhtiyacım olan duygusal yardımı ve desteği ailemden (örneğin, annemden, babamdan, eşimden, çocuklarımdan, kardeşlerimden) alırım.

Kesinlikle hayır	1	2	3	4	5	6	7	**Kesinlikle evet**

3. Arkadaşlarım bana gerçekten yardımcı olmaya çalışırlar.

Kesinlikle hayır	1	2	3	4	5	6	7	**Kesinlikle evet**

4. İşler kötü gittiğinde arkadaşlarıma güvenebilirim.

Kesinlikle hayır	1	2	3	4	5	6	7	**Kesinlikle evet**

5. Ailem ve arkadaşlarım dışında olan ve ihtiyacım olduğunda yanımda olan bir insan (örneğin, flört, nişanlı, sözlü, akraba, komşu, doktor) var.

Kesinlikle hayır	1	2	3	4	5	6	7	**Kesinlikle evet**

6. Ailem ve arkadaşlarım dışında olan ve sevinç ve kederlerimi paylaşabileceğim özel bir insan (örneğin, flört, nişanlı, sözlü, akraba, komşu, doktor) var.

Kesinlikle hayır	1	2	3	4	5	6	7	**Kesinlikle evet**

7. Sorunlarımı ailemle (örneğin, annemle, babamla, eşimle, çocuklarımla, kardeşlerimle) konuşabilirim.

Kesinlikle hayır	1	2	3	4	5	6	7	**Kesinlikle evet**

8. Sevinç ve kederlerimi paylaşabileceğim arkadaşlarım var.

Kesinlikle hayır	1	2	3	4	5	6	7	**Kesinlikle evet**

9. Ailem ve arkadaşlarım dışında olan ve duygularıma önem veren bir insan (örneğin, flört, nişanlı, sözlü, akraba, komşu, doktor) var.

Kesinlikle hayır	1	2	3	4	5	6	7	**Kesinlikle evet**

10. Kararlarımı vermede ailem (örneğin, annem, babam, eşim, çocuklarım, kardeşlerim) bana yardımcı olmaya isteklidir.

Kesinlikle hayır	1	2	3	4	5	6	7	**Kesinlikle evet**

11. Ailem ve arkadaşlarım dışında olan ve beni gerçekten rahatlatan bir insane
(örneğin, flört, nişanlı, sözlü, akraba, komşu, doktor) var

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**

POSTTRAUMATIC GROWTH INVENTORY (PTGI)

Aşağıda hastalığınızdan dolayı yaşamınızda olabilecek bazı değişikler 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 daha 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 kadar 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

RELIGIOUSNESS SCALE (RS)

Aşağıda kişilerin kendi duygu, düşünce ve görüşleri ile ilgili bir takım ifadeler yer almaktadır. Sizden bu maddeleri dikkatlice okuyup her birinde belirtilen duygu, görüş ve davranışların sizin için ne kadar doğru veya yanlış olduğunu belirtmeniz istenmektedir. Lütfen sizin için en uygun seçeneği gösteren numarayı daire içine alınız.

Bence/Benim için:
Kesinlikle yanlış: 1
Yanlış: 2
Ne doğru ne de yanlış: 3
Doğru: 4
Kesinlikle doğru: 5

	Kesinlikle yanlış	**Yanlış**	**Ne doğru ne de yanlış**	**Doğru**	**Kesinlikle doğru**
1. Dini inancımın gereği olan ibadetleri sağlığım elverdiğince yerine getiriyorum.	1	2	3	4	5
2. Dinde yasak edildiğinden içki içmemeye özen gösteriyorum.	1	2	3	4	5
3. Kumar oynamak günah olduğu için kumar oynamaktan kaçınıyorum.	1	2	3	4	5
4. Evlilik dışı cinsel ilişki (zina) dinde yasaklandığı için bu tür ilişkiden kaçınıyorum.	1	2	3	4	5
5. Rüşvet alıp vermek günah olduğu için rüşvet alıp vermekten kaçınıyorum.	1	2	3	4	5
6. İnsanları aldatmak dini inancıma aykırı olduğu için kimseyi aldatmamaya özen gösteriyorum.	1	2	3	4	5

7. Dini inancıma göre doğru sözlü olmak gerektiğinden, doğru söylemeye gayret ediyorum.	1	2	3	4	5
8. Ana-babaya iyi davranmayı Allah emrettiği için anne-babama iyi davranıyorum.	1	2	3	4	5
9. Söz verildiğinde sözünde durmak dini bir kural olduğundan verdiğim sözü tutuyorum.	1	2	3	4	5
10. Komşulara iyi davranmak dini bir prensip olduğundan komşularıma iyi davranıyorum.	1	2	3	4	5
11. Dindar olduğuma inanıyorum.	1	2	3	4	5

WAYS OF COPING INVENTORY (WCI)

Aşağıda insanların sıkıntılarını gidermek için kullanabilecekleri bazı yollar belirtilmektedir. Cümlelerin her birini dikkatlice okuduktan sonra, kendi sıkıntılarınızı düşünerek, bu yolları hiç kullanmıyorsanız **hiçbir zaman**, kimi zaman kullanıyorsanız **bazen**, çok sık kullanıyorsanız **her zaman** seçeneğini belirtiniz.

	Hiçbir zaman	**Bazen**	**Her zaman**
1. Aklımı kurcalayan şeylerden kurtulmak için değişik işlerle uğraşırım.	1	2	3
2. Bir mucize olmasını beklerim.	1	2	3
3. İyimser olmaya çalışırım.	1	2	3
4. Çevremdeki insanlardan sorunlarımı çözmemde bana yardımcı olmalarını beklerim.	1	2	3
5. Bazı şeyleri büyütmeyip üzerinde durmamaya çalışırım.	1	2	3
6. Sakin kafayla düşünmeye ve öfkelenmemeye çalışırım.	1	2	3
7. Durumun değerlendirmesini yaparak en iyi kararı vermeye çalışırım.	1	2	3
8. Ne olursa olsun direnme ve mücadele etme gücünü kendimde hissederim.	1	2	3
9. Olanları unutmaya çalışırım.	1	2	3
10. Başa gelen çekilir diye düşünürüm.	1	2	3
11. Durumun ciddiyetini anlamaya çalışırım.	1	2	3
12. Kendimi kapana sıkışmış gibi hissederim.	1	2	3
13. Duygularımı paylaştığım kişilerin bana hak vermesini isterim.	1	2	3
14. 'Her işte bir hayır var' diye düşünürüm.	1	2	3
15. Dua ederek Allah'tan yardım dilerim.	1	2	3
16. Elimde olanlarla yetinmeye çalışırım.	1	2	3

17. Olanları kafama takıp sürekli düşünmekten kendimi alamam.	1	2	3
18. Sıkıntılarımı içimde tutmaktansa paylaşmayı tercih ederim.	1	2	3
19. Mutlaka bir çözüm yolu bulabileceğime inanıp bu yolda uğraşırım.	1	2	3
20. 'İş olacağına varır' diye düşünürüm.	1	2	3
21. Ne yapacağıma karar vermeden önce arkadaşlarımın fikrini alırım.	1	2	3
22. Kendimde her şeye yeniden başlayacak gücü bulurum.	1	2	3
23. Olanlardan olumlu bir şeyler çıkarmaya çalışırım.	1	2	3
24. Bunun alın yazım olduğunu ve değişmeyeceğini düşünürüm.	1	2	3
25. Sorunlarıma farklı çözüm yolları ararım.	1	2	3
26.'Olanları keşke değiştirebilseydim' diye düşünürüm.	1	2	3
27. Hayatla ilgili yeni bir bakış açısı geliştirmeye çalışırım.	1	2	3
28. Sorunlarımı adım adım çözmeye çalışırım.	1	2	3
29. Her şeyin istediğim gibi olamayacağını düşünürüm.	1	2	3
30. Dertlerimden kurtulayım diye fakir fukaraya sadaka veririm.	1	2	3
31. Ne yapacağımı planlayıp ona göre davranırım.	1	2	3
32. Mücadele etmekten vazgeçerim.	1	2	3
33. Sıkıntılarımın kendimden kaynaklandığını düşünürüm.	1	2	3
34. Olanlar karşısında 'kaderim buymuş' derim.	1	2	3
35. 'Keşke daha güçlü bir insan olsaydım diye' düşünürüm.	1	2	3
36. ' Benim suçum ne' diye düşünürüm.	1	2	3
37. 'Allah'ın takdiri buymuş deyip' kendi kendimi teselli etmeye çalışırım.	1	2	3
38. Temkinli olmaya ve yanlış yapmamaya çalışırım.	1	2	3
39. Çözüm için kendim bir şeyler yapmak isterim.	1	2	3
40. Hep benim yüzümden oldu diye düşünürüm.	1	2	3

41. Hakkımı savunmaya çalışırım.	1	2	3
42. Bir kişi olarak olgunlaştığımı ve iyi yönde geliştiğimi hissederim.	1	2	3

RESSOURCE LOSS SCALE (RLS)

Aşağıda insanların yaşamını etkilediği düşünülen bir dizi kaynak/imkan sıralanmıştır. Sizden son bir yılı düşündüğünüzde bu alanlarda ne derece bir **kayıp** yaşadığınızı 1 ile 5 arasında derecelendirmeniz istenmektedir. Kayıp derecesini ifade eden rakamı yuvarlak içine almanız yeterli olacaktır. Aşağıda verilmiş ama kendi yaşamınız içerisinde yer almayan kaynaklar içinse 1 değerini kullanmanız istenmektedir. Listede bulunmayan ama eklemek istediğiniz ifadeyi formun sonuna (24) yazıp puanlayabilirsiniz.

GEÇTİĞİMİZ YIL içerisinde bu kaynaklarımda ne derece ***KAYBIM*** oldu?

KAYNAKLARIMDA
1 = Hiç kaybım olmadı
2 = Çok az kaybım oldu
3 = Orta seviyede kaybım oldu
4 = Ciddi seviyede kaybım oldu
5 = Çok yüksek seviyede kaybım oldu

KAYNAKLARIM	**Hiç kaybetmedim**				**Çok kaybettim**
1. İşimi ya da işteki statümü kaybettim.	1	2	3	4	5
2. Patronumun ve çalışma arkadaşlarımın desteğini kaybettim.	1	2	3	4	5
3. İyi iletişim kurabilme becerimi kaybettim.	1	2	3	4	5
4. Kendimle ilgili olumlu duygularımı kaybettim.	1	2	3	4	5
5. Yapmak istediklerimi yapabileceğim duygusunu kaybettim.	1	2	3	4	5
6. Günlük işlerimi yapmaktaki becerimi kaybettim.	1	2	3	4	5
7. Yaşamım üstünde kontrolüm olduğu duygusunu kaybettim.	1	2	3	4	5
8. Kendi başıma hayatımı sürdürebilme yeteneğimi kaybettim.	1	2	3	4	5

9. Mutluluğumu ve huzurumu kaybettim.	1	2	3	4	5
10.Yaşamla ilgili umutlarımı kaybettim.	1	2	3	4	5
11. Hastalığımla ilgili harcamalardan dolayı maddi kaybım oldu.	1	2	3	4	5
12. Hastalığımla ilgili olmayan nedenlerden dolayı maddi kaybım oldu.	1	2	3	4	5
13. İstediklerimi yapmak için gerekli olan zamanı kaybettim.	1	2	3	4	5
14. Aile üyeleri ile olan yakın ve sıcak ilişkilerimi kaybettim.	1	2	3	4	5
15. Eşimle olan yakın ve sıcak ilişkilerimi kaybettim.	1	2	3	4	5
16. Cinsel yaşantımdan aldığım zevki kaybettim.	1	2	3	4	5
17. Ev işleri veya çocuk bakımında aldığım yardımları kaybettim.	1	2	3	4	5
18. Arkadaşlarımla olan yakın ve sıcak ilişkilerimi kaybettim.	1	2	3	4	5
19. Sosyal aktivitelere katılmaya olan ilgi ve motivasyonumu kaybettim.	1	2	3	4	5
20. Diğer insanlar için değerli biri olduğum hissini kaybettim.	1	2	3	4	5
21. Düzenli aile yaşantımı kaybettim.	1	2	3	4	5
22. Dayanma/katlanma gücümü kaybettim.	1	2	3	4	5
23. Dini inancımın gereği olan ibadetleri yerine getirme gücümü kaybettim.	1	2	3	4	5
24.	1	2	3	4	5

HOSPITAL ANXIETY AND DEPRESSION SCALE (HADS)

Bu anket sizi daha iyi anlamamıza yardımcı olacak. Her maddeyi okuyun ve son birkaç gününüzü göz önünde bulundurarak nasıl hissettiğinizi en iyi ifade eden yanıtın yanındaki kutuyu işaretleyin. Yanıtınız için çok düşünmeyin, aklınıza ilk gelen yanıt en doğrusu olacaktır.

1) Kendimi gergin, 'patlayacak gibi' hissediyorum.
☐ Çoğu zaman
☐ Birçok zaman
☐ Zaman zaman, bazen
☐ Hiçbir zaman

2) Eskiden zevk aldığım şeylerden hala zevk alıyorum.
☐ Aynı eskisi kadar
☐ Pek eskisi kadar değil
☐ Yalnızca biraz eskisi kadar
☐ Neredeyse hiç eskisi kadar değil

3) Sanki kötü birşey olacakmış gibi bir korkuya kapılıyorum.
☐ Kesinlikle öyle ve oldukça da şiddetli
☐ Evet, ama çok da şiddetli değil
☐ Biraz, ama beni endişelendirmiyor.
☐ Hayır, hiç öyle değil

4) Gülebiliyorum ve olayların komik tarafını görebiliyorum .
☐ Her zaman olduğu kadar
☐ Şimdi pek o kadar değil
☐ Şimdi kesinlikle o kadar değil
☐ Artık hiç değil

5) Aklımdan endişe verici düşünceler geçiyor.
☐ Çoğu zaman
☐ Birçok zaman
☐ Zaman zaman, ama çok sık değil
☐ Yalnızca bazen

6) Kendimi neşeli hissediyorum.
☐ Hiçbir zaman
☐ Sık değil
☐ Bazen
☐ Çoğu zaman

7) Rahat rahat oturabiliyorum ve kendimi gevşek hissediyorum.
☐ Kesinlikle
☐ Genellikle
☐ Sık değil
☐ Hiçbir zaman

8) Kendimi sanki durgunlaşmış gibi hissediyorum.
☐ Hemen hemen her zaman
☐ Çok sık
☐ Bazen
☐ Hiçbir zaman

9) Sanki içim pır pır ediyormuş gibi bir tedirginliğe kapılıyorum.
☐ Hiçbir zaman
☐ Bazen
☐ Oldukça sık
☐ Çok sık

10) Dış görünüşüme ilgimi kaybettim.
☐ Kesinlikle
☐ Gerektiği kadar özen göstermiyorum
☐ Pek o kadar özen göstermeyebiliyorum
☐ Her zamanki kadar özen gösteriyorum

11) Kendimi sanki hep birşey yapmak zorundaymışım gibi huzursuz hissediyorum.
☐ Gerçekten de çok fazla
☐ Oldukça fazla
☐ Çok fazla değil
☐ Hiç değil

12) Olacakları zevkle bekliyorum.
☐ Her zaman olduğu kadar
☐ Her zamankinden biraz daha az
☐ Her zamankinden kesinlikle daha az
☐ Hemen hemen hiç

13) Aniden panik duygusuna kapılıyorum.
☐ Gerçekten de çok sık
☐ Oldukça sık
☐ Çok sık değil
☐ Hiçbir zaman

14) İyi bir kitap, televizyon ya da radyo programından zevk alabiliyorum.
☐ Sıklıkla
☐ Bazen
☐ Pek sık değil
☐ Çok seyrek

APPENDIX C

FACTOR ANALYSIS of PTGI

Factors and Items	F1	F2	F3
Factor 1 "Self-Efficacy Pain and Other Symptoms" (Variance explained 42.31) (Cronbach Alpha .89)			
1. How certain are you that you can decrease your pain quite a bit.	**.81**	-.02	.05
20. How certain are you that you can deal with the frustration of arthritis.	**.74**	.08	.32
15. How certain are you that you can control your fatique.	**.68**	.19	.17
16. How certain are you that you can regulate your activity so as to be active without aggravating your arthritis.	**.64**	.41	.22
18. As compared with other people with arthritis like yours, How certain are you that you can manage arthritis pain during your daily activites.	**.63**	.32	.07
2. How certain are you that you can continue most of your daily activites.	**.60**	.34	.11
6. How certain are you that you can walk 100 feet on flat ground in 20 seconds.	**.57**	.38	-.01
19. How certain are you that you can manage your arthritis symptoms so that you can do things you enjoy doing.	**.57**	.30	.24

Factors and Items	F1	F2	F3
8. How certain are you that you can get out of an armless chair quickly, without using your hands for support.	**.56**	.54	-.16
17. How certain are you that you can that you can walk 10 steps downstairs in 7 seconds.	**.55**	.01	.47
3. How certain are you that you can keep arthritis pain from interfering with your sleep.	**.54**	.30	.12
Factor 2 "Self-Efficacy Function" (Variance explained 10.28) (Cronbach Alpha .89)			
9. How certain are you that you can button and unbutton 3 medium-size buttons in a row in 12 seconds.	.16	**.83**	.02
14. How certain are you that you canput on a long-sleeve front-opening shirt or blouse (without buttoning) in 8 seconds.	.23	**.79**	.02
10. How certain are you that you cancut 2 bite-size pieces of meat with a knife and fork in 8 seconds.	.18	**.77**	.18
12. How certain are you that you canscratch your upper back with both your right and left hands.	.26	**.76**	.20
11. How certain are you that you can turn an outdoor faucet all the way on and all the way of.	.12	**.74**	.16
7. How certain are you that you can that you can walk 10 steps downstairs in 7 seconds.	.53	**.57**	.09
13. How certain are you that you can get in and out of the passenger side of a car without assitance from another person and without physical aids.	.51	**.52**	-.00

Factors and Items	F1	F2	F3
Factor 3 "Self-Efficacy Pain" (Variance explained 7.51) (Cronbach Alpha .85)			
5. How certain are you that you can make a large reduction in your arthritis pain by using methods other than taking extra medication.	.17	.10	**.88**
4. How certain are you that you can that you can make a small-to-moderate reduction in your arthritis pain by using methods other than taking exra medication.	.14	.18	**.87**

There was 2 items on the third factor. Lorig et al. (1989) reported that pain scale might be combined with other symtom scale. Therefore, third factor was combined with pain scale and the combined scale's Cronbach Alpha was .89.

APPENDIX D

TURKISH SUMMARY

Bu çalışma Romatoid artrit (RA) hastalığı olan bireylerin uyumlarını ve uyumlarını yordayan hastalıkla ilgili ve kişisel faktörlerin araştırılmasını içermektedir. Hastalıkla ilgili değişkenler, kişinin sosyo-demografik özellikleri, sahip olduğu kaynaklar (baş etme yolları, dindarlık, algılanan sosyal destek, kişinin başa çıkmaya yönelik öz yeterliği) ve değişik kaynaklardaki azalmanın hastanın kaygı, depresyon, genel psikolojik sıkıntılar ve travma sonrası gelişim düzeylerini yordamadaki rollerini Kaynakların Korunması Kuramı (COR) çerçevesinde incelemektedir.

Kronik hastalıklar geniş kitleleri etkilemekte ve psikolojik sıkıntılara yol açmaktadır. Romatoid artrit (RA) de kronik, ilerleyici ve tamamen tedavisi mümkün olmayan bir hastalıktır. RA kronik ağrı, yorgunluk, eklemlerde şişme ve sertlik ve ileriki dönemlerde de yeti yitimine neden olmaktadır. RA kişinin yaşamında psikolojik ve sosyal etkilere sahiptir. Bu hastalık bireyin iş kapasitesini, sosyal rollerini, aile yaşamını, günlük yaşam aktivitelerini, benlik kavramını, duygu durumunu ve psikolojik sağlığını etkilemektedir. RA hastaları diğer kronik hastalar ve sağlıklı bireylere göre daha yüksek oranda kaygı ve depresyon gibi psikolojik sıkıntılar yaşamaktadırlar (Altan, ve ark., 2004; Anderson, ve ark., 1985).

Taal ve ark., (1993) RA hastalarının sağlık durumu ve psikolojik değişkenleri inceledikleri araştırmalarında bu hastaların en çok bağımlılık hissi, ağrı ve yeti yitimi yaşadıklarını tespit etmişlerdir. O'Leary (1986) RA hastaları ile yaptığı çalışmasında

hareket sırasında yaşanılan ağrı nedeniyle bu hastaların daha az aktivite yaptıklarını ve depresif belirtiler gösterdiklerini belirlemişlerdir. Kişinin gittikçe artan aktivite azlığı ve depresif belirtiler daha fazla ağrı hissetmesine neden olmakta ve böylelikle bir kısır döngü oluşmaktadır.

Smedstad ve ark. (1996) RA hastalarını kontrol grubu ile karşılaştırdıkları araştırmada, RA hastalarının kontrol grubundaki bireylere nazaran daha çok kaygı ve depresyon yaşadıklarını bulmuşlardır. RA hastalarının %20'si psikolojik sıkıntılar yaşarken kontrol grubunun sadece %6'sı bu problemleri yaşamaktadır. Başka bir çalışmada ise diğer kronik hastalara göre de RA hastalarının daha çok depresif belirtiler gösterdikleri bulunmuştur (Pennix, ve ark., 1997).

Bir çok çalışmada depresyonun RA hastaları için önemli bir problem olduğu gösterilmiştir. (Abdel-Nasser ve ark., 1998; Katz & Yelin, 93; Walsh ve ark., 1999). RA hastalarında depresyon görülme oranı oldukça fazladır. Walsh ve ark. (1999) RA hastalarında depresyon oranını %35.7 ve bu kişilerin eşlerinde depresyon görülme olasılığını ise %23 olarak belirtmişlerdir. Soderlin ve ark. (2000) tarafından yapılan toplum bazlı çalışmada da RA hastalarının %20'sinin depresyonu olduğu rapor edilmiştir. Abdel-Nasser ve ark. (1998) RA hastalarının depresyon seviyesinin osteoartrit hastalarından yüksek olduğunu bulmuşlardır.

Kaygı bozukluğu RA hastalarının sıklıkla yaşadığı diğer bir duygusal bozukluktur. El- Miedany and El-Rashed (2000) kaygının (%70) RA hastalarında depresyondan (%66.2) daha sık görüldüğünü ve ayrıca RA hastalarının durumluk kaygı düzeyinin normatif örneklemle benzer düzeyde olduğunu bulmuşlardır. Buna karşılık sürekli kaygı düzeyleri normatif gruba göre belirgin olarak daha yüksektir.

Kronik fiziksel hastalığı olan hastalarla yapılan pek çok çalışma hastalık nedeniyle yaşanan psikolojik sıkıntılara odaklanmıştır. Kronik hastalıkların genel olarak yarattığı olumsuz etkilere rağmen bazı kişiler için olumlu etkileri de olduğu bilinmektir. Büyük bir travmaya maruz kalan kişilerin bazıları kendilerini algılama, diğer insanlar ile ilişkiler ve yaşam felsefeleri ile ilgili olumlu değişimler yaşamaktadırlar. Bu kişilerin öz yeterlik hisleri artmakta, diğer insanlar ile ilişkilerinde daha sıcak, dostça ve empatik olabilmekte ve yaşamdaki önceliklerinde değişimler olabilmektedir (Tedeschi, Park, & Calhoun, 1998).

Değişik hasta grupları ile yapılan çalışmalarda, kanser (Cordova et al., 2001), kalp hastaları (Sheikh, 2004) ve RA hastalarının (Abraido Lanzo et al., 1998) yaşadıkları tüm sıkıntılara rağmen yaşamlarında olumlu yönde değişiklikler olduğu ve travma sonrası gelişim gösterdikleri bulunmuştur.

Sonuç olarak, RA hastası olmak ve bu nedenle yaşanılan travma kişisel gelişim için bir fırsat da olabilir. Bu hastalık kişilerin sadece psikolojik sıkıntılar yaşamalarına değil aynı zamanda kendileri, dünya ve diğer insanlar hakkındaki inançlarını tekrar değerlendirmelerine neden olabilir. Eğer kişiler RA hastası olmaları nedeniyle gelişim elde edebilirlerse hastalıklarına daha iyi uyum sağlayabilirler ve yaşamdan daha fazla doyum sağlayabilirler.

Tüm bu nedenlerden dolayı, RA hastalarının ne kadar travma sonrası gelişim yaşadıkları ve travma sonrası gelişimin yordayıcılarının neler olduğunun anlaşılması için bu kavram da çalışma kapsamına dahil edilmiştir.

Kaynakların Korunması Kuramı (COR) Hobfoll (1988) tarafından geliştirilen stres modellerinden birisidir. Hobfoll psikolojik stresi kaynak kaybına yönelik tehdit,

kaynakların kaybı ve kaynak yatırımından sonra yeni kaynak kazanımının sağlanamamasına tepki olarak tanımlamıştır (Hobfoll, 1989). Kurama göre dört çeşit kaynak vardır. Bunlar konut, sağlık, ulaşım gibi objektif kaynaklar; zaman, gelir, eğitim, sigorta, kredi, bilgi gibi enerji kaynakları; düzenli evlilik, güvenli iş gibi statü/durum kaynakları; kendine güven gibi kişisel kaynaklardır. Norries ve Kaniasty (1996) stresli yaşam olaylarının kaynaklarda azalmaya yol açtığını rapor etmişlerdir. COR kuramına göre kronik stres kaynak kaybına ve kaynakların sürekli sarf edilmesi sonucunda da kaynakların büyük kısmının ya da tamamının kaybına yol açmaktadır. Psikolojik sıkıntı kişisel, sosyal ve çevresel faktörlerin karşılıklı etkileşimi sonucunda oluşmaktadır (Hobfoll, 1989).

Hobfoll (2002)'a göre öz yeterlik, iyimserlik, öz güven, kontrol hissi ve sosyal destek bir çok araştırmada incelenen ana kaynaklardır. Bu kaynaklara sahip olmak kişilerin dayanıklığını artırmaktadır. Kaynakların kaybı kaygı, depresyon, öfke, iş performansı, öz güven ve fiziksel sağlık düzeyini etkilemektedir. Bu araştırmada RA hastalarının temel kişisel kaynakları yani öz yeterlik ve dindarlığın psikolojik sağlıklarını yani depresyon, kaygı ve travma sonrası gelişim düzeylerinin nasıl etkilediği Kaynakların Korunması Kuramı (COR) çerçevesinde incelenmiştir.

Bir çok doğal afetler sonrası yapılan çalışmada COR kuramı, yani bireyin sahip olduğu kaynaklar ve bu kaynaklardaki değişimin psikolojik etkileri incelenmiştir (Benight ve ark. 1999a; Benight ve ark., 1999b). Bir çok çalışmada kaynak kaybının depresyon, kaygı ve öfkenin güçlü yordayıcısı olduğu bulunmuştur (Hegstad, 2000; Lane & Hobfoll, 1992). Kaynak kaybının somatik belirtiler ve alkol kullanımı ile de ilişkili olduğu bulunmuştur.

Kanser, kalp hastalığı, artrit gibi kronik hastalıklar fiziksel ve psikolojik kayıplara yol açmaktadır. Fiziksel kayıplar, enerji kaybı, fiziksel güç kaybı, yetenek kaybı ve sakatlıkları içermektedir ve mesleksel ve boş zaman uğraşlarında kayıplara neden olmaktadır. Kronik hastalıklar kişilerin geleceklerinin ne olacağının belirsizliği nedeniyle kontrol hissinin kaybına, stresör ile ilgili kişisel sorumluluğa ve artan bağımlılık gibi psikolojik kayıplara da yol açmaktadır (Thompson & Kyle, 2000).

Lane and Hobfoll (1992) kaynak kaybının etkilerini ağır kronik solunum yolu hastalığı olan hastalarda incelemişlerdir. Kaynak kaybının kişide öfke hissine ve bu his sonucu yapılan davranışlar nedeniyle de kişiye destek veren kişilerin de öfke hissetmesine neden olduğunu bulmuşlar. Bu çalışma kronik stresin hem kişisel hem de sosyal kaynaklarda azalmaya neden olduğunu göstermektedir.

İyi bir eğitime sahip olmak, iyi bir evlilik, yeterli maddi gelir ve sağlık gibi sosyo-demografik değişkenler COR kuramı tarafından kaynak olarak değerlendirilmektedir. Sosyo-demografik değişkenlerin araştırıldığı bir çok çalışmada kadınların, bekarların, düşük eğitimli ve düşük sosyo-ekonomik düzeye sahip olanların ve şehirde yaşayanların daha yüksek düzeyde depresyon yaşadıkları bulunmuştur (Abdel-Nasser ve ark., 1998; Dowdy ve ark., 1996; Jakobsson & Hallberg, 2002; Markenson, 1991; Wright ve ark., 1998). Bu çalışmada yaş, cinsiyet, eğitim düzeyi, gelir düzeyi, medeni durum gibi değişkenler bağımsız değişkenler olarak incelenmiştir.

Bir çok çalışma fiziksel hastalık ile ilgili değişkenlerin depresyon, kaygı gibi psikolojik sıkıntılar ile ilişkisi olduğunu göstermiştir (Abdel- Nasser ve ark., 1998;

Jakobsson & Hallberg, 2002; Pastor Oliver ve ark., 1998; Sharpe ve ark. 2001; Smedstad ve ark., 1996). Bu çalışmada da hastaların hastalık süresi, hastaneye yatıp yatmamaları, başka hastalıklarının olup olmaması, romatoid artrit nedeniyle ameliyat olup olmamaları, ağrı ve yorgunluk düzeyleri, hastalıklarının ne kadar akut düzeyde olduğu ve hastalıklarının günlük aktivitelerinin ne kadar etkilediği ile ilgili algıları, algılanan hastalık şiddeti, ESR (eritrosit sedimentasyon hızı) CRP (C reactive protein) ve romatoid faktör bağımsız değişkenler olarak RA hastalarının psikolojik uyumlarını nasıl etkilediklerini belirlemek amacıyla incelenmiştir.

Dindarlık fiziksel ve psikolojik sağlığı etkileyen bir değişkendir (Harris ve ark., 1995; Killpatric ve McCullough, 1999; Prado ve ark., 2004). Ancak, dindarlık ile fiziksel ve psikolojik sağlık arasındaki ilişkiyi inceleyen çok az sayıda araştırma bulunmaktadır.

Killpatric ve McCullough (1999) dindar olmanın kişilerin fiziksel özürleri ile baş etmelerinde önemli bir kaynak olduğunu belirtmektedirler. Ayrıca dindar olan özürlü kişilerin fiziksel olarak daha sağlıklı ve daha az psikolojik rahatsızlık yaşadıklarını göstermişlerdir. Powell ve ark., (2003) yaptıkları literatür taraması sonucunda dindarlığın kalp-damar hastalıklarından koruyucu bir kaynak olduğunu belirlemişlerdir. Başka araştırmalarda ise yaşlı kişilerde ölüm oranı ile dini faaliyetlere katılım arasında anlamlı bir ilişki olduğu bulunmuştur (Lutgendorf ve ark., 2004; Powell ve ark.., 2003).

Dindarlık kronik hastaların hastalıklarına uyumu ve psikolojik olarak daha sağlıklı olmalarında önemli role sahip kaynaklardar biridir. Bir çok çalışmada dindar olan hastaların diyetlerine daha çok dikkat ettikleri, daha çok sosyal destek aldıkları, daha az kaygı ve depresyon yaşadıkları bulunmuştur. (Harris, ve ark., 1995; Prado,

ve ark., 2004; Pressman, ve ark., 1990). Bu çalışmada da dindarlığın sahip olunan bir kaynak olarak RA hastalarının psikolojik uyumlarını nasıl etkilediği araştırılmıştır.

Öz yeterlik kişisel özelliklerden biridir ve Bandura (1986)'ya göre kişilerin duyguları ve davranışlarının belirleyicisi kendileri ile ilgili algıladıkları öz yeterliktir. Öz yeterlik, stres tepkileri ve kişilerin baş etme becerilerinde temel bir role sahiptir. Öz yeterliği yüksek kişiler daha uygun baş etme becerilerini seçmekte ve böylece onlar için travmatik olay daha az olumsuz etkilerle sonuçlanmaktadır (Benight & Bandura, 2004). Son dönemlerde RA hastaları ile yapılan araştırmalarda öz yeterlik psikolojik ve fiziksel sağlığın bir yordayıcısı olduğu bulunmuştur (Barlow ve ark., 2002; Brekke ve ark., 2001). Bu çalışma da önemli kişisel kaynaklardan biri olan baş etmeye yönelik öz yeterliğin psikolojik sıkıntılar ve travma sonrası gelişim düzeyi ile olan ilişkisi incelenmiştir.

Sonuç olarak, bu çalışma ile RA hastalarının yaşadıkları psikolojik sıkıntılar ve travma sonrası gelişim düzeyleri ve bunların yordayıcıları COR kuramı çerçevesinde incelenmiştir. Çalışma da COR kuramının fiziksel hastalığı olan bir grupta test edilmesi amaçlanmıştır. Ayrıca bu hasta grubu ile çalışan uzmanların, bu yordayıcıları gözönünde bulundurarak hastalara müdahale etmeleri sağlanabilir. Buna ek olarak, bu çalışma ile hastalığın sadece olumsuz değil olumlu yönleri de olabileceği düşünülerek ve hastaların da bu yöne odaklanmaları sağlanarak psikolojik stres düzeyinin en aza indirilmesi sağlanabilir.

2. Yöntem

Katılımcılar ve İşlemler: Bu çalışmada kullanılmak üzere Romatoid hastalarının özyeterlik düzeyini ölçen Artrite Özgü Özyeterlik Ölçeği Türkçe'ye uyarlanmış ve bu hastaların kaynak kaybını ölçmeye yönelik Kaynak Kaybı Ölçeği geliştirilmiştir. Hem bu iki ölçek hem de ana çalışmada kullanılacak ölçeklerin psikometrik özelliklerini değerlendirmek için tüm ölçekler 49 Romatoid artrit hastasına uygulanarak bir pilot çalışma yapılmıştır. Bu çalışma ana çalışmada kullanılacak tüm ölçeklerin psikometrik kalitesinin iyi olduğunu ve bu hasta grubunda kullanılmaya uygun olduklarını göstermiştir. Daha sonra da ana çalışma yapılmıştır.

124 yetişkin romatoid artrit hastası çalışmanın örneklemini oluşturmuştur. 7 hastanın psikolojik hastalık tanısı olması nedeniyle bu hastalar analizlere katılmamıştır. 99 kadın ve 18 erkek (yaş ortalaması 48.5) hasta çalışmaya katılmıştır. Veriler Ankara Numune Eğitim ve Araştırma Hastanesinden (Fizik Tedavi ve Rehabilitasyon Servisi, Fizik tedavi ve Rehabilitasyon Polikliniği ve Romatoloji Servisinden) toplanmıştır. Artrite Özgü Özyeterlik Ölçeği ve Kaynak Kaybı Ölçeği'nin test-tekrar test güvenirliğini belirlemek için 30 hastaya en az iki hafta sonra bu iki ölçek tekrar uygulandı. Hem pilot hem de ana çalışmada ölçek soruları tezin yazarı tarafından okunarak ölçekler uygulanmıştır.

Ölçüm Araçları:

Demografik ve Hastalıkla İlgili Bilgi Formu, Kaynak Kaygı Ölçeği, Dindarlık Ölçeği, Baş etme Yolları Ölçeği, Çok Boyutlu Algılanan Sosyal Destek

Ölçeği, Artrite Özgü Öz Yeterlik Ölçeği, Travma sonrası Gelişim Ölçeği, Hastane Kaygı ve Depresyon Ölçeği uygulandı.

Demografik ve Hastalıkla İlgili Bilgiler: Kişilerin demografik özellikleri, romatoid artrit tanı süresi, ilgili ameliyatlar gibi hasta ve hastalığı ilgili bilgiler bu çalışma için geliştirilmiş olan 'Demografik ve Hastalıkla İlgili Bilgiler Formu' kullanılarak alınmıştır.

Kaynak Kaybı: 7 hasta ve 2 hasta yakını ile yapılan görüşmeler ve Hobfoll (1989) tarafında geliştirilen COR-E (Kaynakların Değerlendirilmesi) ölçeğinin incelenmesi sonucunda geliştirilen 21 maddelik Kaynak Kaybı Ölçeği ile romatoid artrit hastalarının son bir yıl içerisinde yaşadıkları kaynak kayıpları değerlendirilmiştir.

Dindarlık: Yaparel (1996) tarafından geliştirilmiş Dindarlık Ölçeği'nin davranış boyutunu ölçen 10 maddesi kullanılmıştır. Ayrıca kişilerin kendilerini ne kadar dindar bulduklarının sorulduğu bir soruyla da dindarlık ölçülmüştür.

Baş etme Yolları: Folkman and Lazarus (1988) tarafında geliştirilen 66 maddelik Baş Etme Yolları Ölçeği'nin, Karanci ve ark., (1999) tarafından kısaltılmış olan 41 maddelik formu hastaların ne tür baş etme yolları kullandıklarını belirlemek için kullanılmıştır.

Sosyal Destek: Hastaların sosyal destek algıları Zimet ve ark., (1988) tarafından geliştirilen Çok Boyutlu Algılanan Sosyal Destek Ölçeği kullanılarak ölçülmüştür.

Artrite Özgü Öz Yeterlik: Artrite özgü öz yeterlik Lorig ve ark., (1989) tarafından geliştirilen 20 maddelik Artrite Özgü Öz Yeterlik Ölçeği kullanılarak ölçülmüştür.

Travmaya Sonrası Gelişim: Travmaya sonrası gelişimi ölçmek için Tedeschi ve Calhoun (1996) tarafından geliştirilen 21 maddelik Travma Sonrası Gelişim Ölçeği kullanılmıştır.

Kaygı ve Depresyon: Hastaların kaygı ve depresyon düzeyi Zigmond ve Snaith (1983) tarafından geliştirilen 14 maddelik Hastane Kaygı ve Depresyon Ölçeği kullanılarak ölçülmüştür.

3. Temel Bulgular

Romatoid artrit hastalarının orta düzeyde depresyon, kaygı ve travma sonrası gelişim yaşadıkları belirlendi. Hastalar kendilerini çok dindar olarak tanımlamışlar ve yakınlarından da yüksek düzeyde sosyal destek aldıklarını belirtmişlerdir. Hastalar son bir yıl içerisinde orta düzeyde kaynak kaybettiklerini belirtmişlerdir. Ayrıca romatoid artrit hastalığı ile baş etmede orta düzeyde yeterli olduklarını belirtmişlerdir.

Kaygı, depresyon, genel psikolojik sıkıntılar ve travma sonrası gelişimin yordayıcılarını belirlemek için 7 ayrı regresyon analizi yapılmıştır. Cinsiyet, yorgunluk düzeyi kaynak kaybı, çaresiz baş etme yolunu kullanmak ve algılanan sosyal destek kaygıyı yordarken hastalığın günlük aktivitleri etkileme düzeyi, kaynak kaybı, problem odaklı baş etme ve artrit ile baş etme ile ilgili öz yeterlik depresyonu yordamıştır. Kısaca kadınlar ve kendilerini daha fazla yorgun hisseden hastalar daha fazla kaygı yaşamaktadır. Daha fazla kaynak kaybı yaşayan hastaların daha yüksek düzeyde depresyon ve kaygı yaşadıkları tespit edilmiştir. Çaresiz baş etme yolunu kullanmak kaygıyı artırırken problem odaklı çözüm yolunu kullanmak depresyonu

azaltmaktadır. Daha fazla sosyal destek algılayan hastalar daha az kaygı yaşamaktadırlar. Hastalıkları ile baş etme ile ilgili öz yeterliği yüksek olan hastalar daha az depresyon yaşamaktadırlar. Çok kaynak kaybı ve daha çok çaresiz baş etme yolunu kullanmak genel psikolojik sıkıntıların arttırmakta ancak problem odaklı baş etmeyi daha fazla kullanmak ise genel psikolojik sıkıntıları azaltmaktadır. Cinsiyet, algılanan hastalık şiddeti, algılanan sosyal destek ve problem odaklı baş etme travma sonrası gelişimin yordayıcılarıdır. Başka bir ifadeyle kadınlar, hastalığını daha şiddetli algılayan hastalar, daha fazla sosyal destek alan ve problem odaklı baş etme yolunu kullanan hastalar daha fazla travma sonrası gelişim yaşamaktadırlar.

4. Değerlendirme, Sonuç ve Öneriler

Araştırmanın sonuçları romatoid artrit hastalarının orta düzeyde kaygı ve depresyon yaşadıklarını göstermiştir. Hastalar yaşadıkları psikolojik sıkıntılar yanında hastalığın getirdiği tüm olumsuzluklara rağmen orta düzeyde travma sonrası gelişim de yaşamaktadırlar. Hastaların sahip olduğu kaynaklar ve kaynak kaybı yaşadıkları psikolojik sıkıntı ve travma sonrası gelişimle ilişkili önemli değişkenlerdir. Kaynak kaybı hem kaygı hem de depresyonu etkileyen önemli bir faktördür. Çok kaynak kaybı yaşayan hastalar daha yüksek düzeyde kaygı ve depresyon yaşamaktadırlar. Kadınlar daha fazla kaygı yaşamaktadırlar bu nedenle kaygı ile baş etmeye yönelik müdahalelerde daha fazla önem verilmesi gereken bir gruptur. Kendilerini daha çok yorgun hisseden hastalar daha çok kaygı, hastalıklarının günlük aktivitelerini daha çok etkilediğini düşünen hastalar ise daha çok depresyon yaşamaktadır. Hastaların bu algılarını daha olumlu yönde değiştirmeleri konusunda psikolojik müdahaleler yapılması yararlı olacaktır.

Hastalıkları ile baş etmeye yönelik öz yeterlikleri daha yüksek olan hastalar daha az depresyon yaşamaktadırlar. Bu nedenle yapılacak psikolojik müdahalelerde hastaların öz yeterliklerinin arttırılması yaşadıkları depresyonu azaltmada önemli bir faktör olacaktır. Hastaların baş etme yolları yaşadıkları psikolojik sıkıntı ve travma sonrası gelişimin önemli yordayıcılarıdır. Problem odaklı baş etmeyi kullanan hastalar daha az depresyon yaşarken daha fazla travma sonrası gelişim yaşamaktadırlar. Çaresiz baş etme yolunu kullanmak daha fazla kaygı yaşanmasına sebep olurken daha fazla sosyal destek algılamak ise daha az kaygı yaşamaya neden olmaktadır. Hastalara yapılacak psikolojik müdahalelerde kişilerin kullandıkları baş etme yollarını ve algıladıkları sosyal destek düzeyi dikkate alınarak müdahalelerin yapılması önem taşımaktadır.

5. **Çalışmanın Başlıca Katkıları**

Bu çalışmanın önemli bir katkısı, RA gibi kronik ve gittikçe kötüleşen bir hastalığı olan bireylerin psikolojik sıkıntılar yaşarken aynı zamanda travma sonrası gelişim gibi olumlu değişimler de yaşayabildiklerini göstermesidir. Literatürde hem psikolojik sıkıntılar hem de olumlu değişikliklerin aynı örneklemde değerlendirildiği başka bir çalışma olmaması nedeniyle literatüre önemli katkı sağlamaktadır.

Bu çalışmanın diğer bir katkısı da kişilerin sahip olduğu kaynaklar ve bu kaynakların kaybının hastaların hastalıklarına ve hastalık sonucu oluşan yaşam değişikliklerine uyum sağlamada önemli bir role sahip olduğunu göstermesidir. Kaynakların kaybı hastaların daha çok kaygı, depresyon ve genel psikolojik sıkıntılar yaşamasına neden olmaktadır. Bu çalışmanın örnekleminde yer alan hastaların diğer Türk RA hastalarından daha yüksek düzeyde kaygı ve depresyon yaşadıkları

bulunmuştur. Bu bulgunun bu çalışma da yer alan hastaların daha az kaynağa sahip olması ile ilişkili olduğu düşünülmektedir. Çünkü hastalar çok düşük gelir düzeyi, düşük eğitim düzeyi ve çalışmayan kişilerden oluşmaktadır. Bu bulgular da COR kuramının temel prensiplerini desteklemektedir. Daha az kaynağa sahip olmak ve daha çok kaynak kaybı bireylerin daha çok psikolojik sıkıntılar yaşamasına neden olur hipotezlerini RA hastalığı olan bireylerde de desteklemektedir.

Bu çalışmanın diğer bir katkısı ise baş etme yollarının hastaların yaşadıkları psikolojik sıkıntılar ve olumlu değişimlerle ilişkili önemli bir kaynak oldugunu göstermesidir. Problem odaklı baş etme yolunu daha çok kullanan hastalar daha az psikolojik sıkıntılar yaşarken daha çok travma sonrası gelişim yaşamaktadırlar. Bu nedenle bu hastalara yapılacak psikolojik müdahalelerde baş etme yollarının belirlenmesi ve uygun baş etme stratejilerinin geliştirilmesine yardımcı olunması önemlidir. Ayrıca bu çalışmada COR kuramının belirttiğinin aksine baş etme yollarının zayıf değil güçlü kaynaklar olduğu bulunmuştur. Bu bulgu da literatüre önemli bir katkıdır.

Algılanan sosyal desteğin hastaların kaygısını azaltığı ancak travma sonrası gelişimi arttırdığı bulunmuştur. Sosyal destek ile psikolojik sıkıntılar ve olumlu değişimler arasındaki ilişki literatürdeki bulguların Türk RA hasta grubunda da geçerliğine ilişkin kanıt niteliğindedir. Bu bulgu RA hastaları ile çalışan ruh sağlığı uzmanlarına hangi konulara terapilerde odaklanmalarını göstermesi bakımından önemlidir. Bu çalışma RA hastalarının ailelerine sosyal desteğin önemi konusunda eğitim verilmesi gerektiğini göstermektedir. Ayrıca bu hastaların hastalıklarını tedavi eden doktorların da bu hastaların sadece fiziksel tedavilerine odaklanmamaları bu hastaların psikolojik sıkıntılar yaşayabileceklerini düşünerek bu kişileri ihtiyaç

olduğunda psikolojik yardim veren servislere yönlendirmeleri önemlidir. Bu nedenle bu hastaları tedavi eden doktorların eğitiminde bu hastalarin psikolojik sıkıntılar yaşayabilecekleri ve bu sıkıntıları icin yardim almak üzere yönlendirilmeleri gerektiği konusu yer almalidir.

Bu çalışmanın başka önemli bir katkısı da önemli bir kaynak olan artrite özgü öz yeterliğin depresyonu azaltmada önemli bir değişken olduğunu göstermesidir. Artrit öz yeterliği yüksek olan hastaların daha düşük düzeyde depresyon yaşadıkları bulunmuştur. Bu bulgu da psikolojik yardım hizmeti veren psikolog, psikaytrist gibi uzmanlara RA hastaları ile çalışırken artrite özgü öz yeterliğin belirlenmesi ve artrit öz yeterlik düzeyinin arttırılmasının depresyon düzeyini azaltmada önemli olduğunu göstermesidir.

Bu çalışmanın diğer bir bulgusu ise RA hastalarının hastalıkları ile ilgili daha çok kötümser düşüncelere sahip olmaları ve soru setinin uygulanması esnasında sordukları sorulardan hastalıkları ile ilgili çok az bilgi sahibi olduklarının belirlenmesidir. Bu çalışmada hastaların bilgi düzeyi ile yaşadıkları psikolojik sıkıntılar arasındaki ilişki incelenmemiş olmakla birlikte hastaların bilgi eksikliği ile psikolojik sıkıntılar arasında ilişki olduğu ve bilgi eksikliğinin giderilmesi ile psikolojik sıkıntılarının azaltılabileceği düşünülmektedir. Bu görüş de literatürdeki bilgi verme ile psikolojik sıkıntılar arasındaki ilişkinin incelendiği çalışma sonuçları ile desteklenmektedir.

Bahsedilen katkıların yanısıra, bu araştırma için geliştirilen ve Türkçe'ye adapte edilen yeni ölçekler de alana katkı sağlamaktadır. Bu ölçeklerin RA hastalarında kullanılmak için güvenilir ve geçerli ölçekler olduğu belirlenmiştir. Ancak yine de COR kuramının ve bu çalışmada ölçülen diğer kaynakların ve söz

konusu ölçme araçlarının başka örneklem gruplarında sınanması da literatüre daha fazla katkı sağlayacaktır.

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AWARDS

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