

THE ASSOCIATION BETWEEN METACOGNITIONS AND PSYCHOLOGICAL  
SYMPTOMS: MODERATOR ROLE OF COPING STRATEGIES

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## **ABSTRACT**

### **THE ASSOCIATION BETWEEN METACOGNITIONS AND PSYCHOLOGICAL SYMPTOMS: MODERATOR ROLE OF COPING STRATEGIES**

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The present study firstly aimed to examine specific metacognitions as unique predictors of various psychological symptoms including anxiety, depression, worry and social anxiety. The second aim of the study was to investigate the moderator role of coping styles in the relationship between metacognitions and these psychological symptoms. Based on these aims, the study was conducted with 435 participants between the ages 18-35 and the following scales were administered in addition to demographic forms; Trait Anxiety Inventory, Beck Depression Inventory, Penn State Worry Questionnaire, Libowitz Social Anxiety Scale, Metacognitions Questionnaire-30 and The Ways of Coping Inventory. According to the results, Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2) was found to be as significant predictor of all examined psychological symptoms. Positive Beliefs about Worry (MCQ-1) was also revealed as significant predictor of anxiety, worry and

social anxiety and avoidance. Furthermore, the results revealed negative associations between Cognitive Self-Consciousness (MCQ-5) and anxiety, worry and social anxiety. Finally, Beliefs about Need to Control Thoughts (MCQ-4) was found to be related with increase in depression and decrease in worry. In addition, regression analyses revealed negative relationship between Problem-Focused Coping and anxiety, depression and worry; and positive relationship between Emotion-Focused Coping and anxiety, social anxiety and avoidance. The moderation models of coping styles was also supported in which coping ways moderate the relationship between metacognitions and psychological symptoms including depression, absence of worry, social anxiety and avoidance. Findings were discussed based on relevant literature; and clinical implications of the study and future directions were also provided.

**Keywords:** Metacognitions, Coping Styles, Psychological Symptoms

## ÖZ

# ÜSTBİLİŞ FAKTÖRLERİ İLE PSİKOLOJİK SEMPTOMLAR ARASINDAKİ İLİŞKİ: BAŞA ÇIKMA STRATEJİLERİNİN DÜZENLEYİCİ ROLÜ

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Bu çalışmanın amacı, ilk olarak üstbiliş faktörlerinin bağımsız olarak psikolojik semptomlar (sürekli kaygı, endişe, depresyon ve sosyal kaygı-kaçınma) üzerindeki etkisini incelemektir. Çalışmanın bir diğer amacı da, üstbilişlerle bu psikolojik semptomlar arasındaki ilişkinin yordanmasında başa çıkma stratejilerinin düzenleyici rolünün incelenmesidir. Çalışmanın bu amaçlarına ulaşmak için, yaşları 18 ile 35 arasında değişen 435 katılımcıdan veri toplanmış ve bu katılımcılara demografik bilgi formunun yanı sıra Sürekli Kaygı Envanteri, Beck Depresyon Envanteri, Penn Eyalet Endişe Ölçeği, Liebowitz Sosyal Kaygı Ölçeği, Üst-Bilişler Ölçeği-30 ve Başa Çıkma Yolları Envanteri uygulanmıştır. Elde edilen sonuçlara göre, üstbiliş faktörlerinden düşüncenin ve tehlikenin kontrol edilemezliği ile ilgili olumsuz inançlar; tüm psikolojik semptomlarla anlamlı ve pozitif yönde ilişkilidir.

Ayrıca diđer üstbiliş faktörlerinden biri olan endişeye dair olumlu inançlar da sürekli kaygı, endişe ve sosyal kaygı-kaçınma değişkenleriyle anlamlı ve pozitif yönde ilişkili bulunmuştur. Bununla birlikte, sürekli kaygı, endişe ve sosyal kaçınmayı anlamlı olarak yordayan bir diđer faktör de bilişsel farkındalık olarak bulunmuştur. Son olarak, düşünceleri kontrol etme ihtiyacı depresyonla pozitif, endişeyle ise negatif yönde anlamlı ilişki olduğu saptanmıştır. Üstbiliş faktörlerine ek olarak, problem odaklı başa çıkma stratejilerin kullanımının sürekli kaygı, depresyon, endişe düzeyi ile negatif yönde; duygu odaklı stratejilerin ise sürekli kaygı ve sosyal kaygı-kaçınmayla pozitif yönde anlamlı olarak ilişkili olduğu belirlenmiştir. Baş etme stratejilerinin düzenleyici rolü de regresyon analizleri kullanılarak incelenmiş ve bu stratejilerin üstbilişlerle girdiği etkileşimin depresyon, endişe, sosyal kaygı ve kaçınma düzeyinin anlamlı olarak yordadığı bulunmuştur. Çalışmada elde edilen bulgular, ilgili literatür desteğiyle tartışılmış; bu çalışmanın klinik uygulamalara katkısı ve gelecekte yapılabilecek çalışmalar için öneriler ifade edilmiştir.

**Anahtar Kelimeler:** Üstbiliş, Başa Çıkma Stratejileri, Psikolojik Semptomlar

To My Family

And

Mine Dađlı

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## **CHAPTER I**

### **INTRODUCTION**

Psychological disorders have an enduring history since the earliest decades. Nonetheless, in recent times, emotional disorders are considered as one of the most serious problem in the world. In the consideration of severity of problem, the area of psychopathology has thriven with various conceptual perspectives in order to have a comprehensive picture about etiology, maintenance and treatment of emotional disorders. In this attempts, although different perspectives (i.e. psychoanalytical, biological, or environmental paradigms etc.) focus on different vulnerability factors; empirical studies feasibly indicate the crucial role of cognitions, emotions and behaviors in emotional disorders. Therefore, recent theories have developed in an endeavor to explain emotional disorders by establishing interdependent effects of these factors.

Cognitive theories are relatively recently developed theories basically suggesting that there is a relation between experiencing an event and feeling an emotion; and this relationship is mediated by cognitions (Ortony, Clore, & Collins, 1988). In terms of explaining emotional disorders, the logic is that it is not the only event itself determines how the person feels or responds, but also subjective interpretations or appraisals have crucial role in this relation (Lazarus, 1991). Cognitive theories basically focus on cognitive vulnerability including maladaptive

schemas, automatic thoughts and maladaptive cognitive processes to explain psychological problems (Beck, 1976; Beck & Clark, 1997).

Metacognitive Theory is one of these recently developed theories focusing on information processing factors in etiology and the maintenance of psychological disorders. The basic principles have driven from cognitive theories. However; unlike other cognitive perspectives, this theory does not focus on content of the dysfunctional schemas or unconscious cognitive processes, rather psychological problems are associated with individual's maladaptive cognitive strategies which closely related with emotions and behaviors (Fisher & Wells, 2009).

On the basis this theory, the present study aims to investigate the moderator role of coping strategies in the relationship between metacognitions [i.e., Positive Beliefs about Worry (MCQ-1), Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2), Lack of Cognitive Confidence (MCQ-3), Beliefs about Need to Control Thoughts (MCQ-4) and Cognitive Self-Consciousness (MCQ-5)] and psychological symptoms (i.e. anxiety, depression, worry and social anxiety).

### **1.1 Metacognitive Theory**

Unlike other traditional cognitive theories such as cognitive-behavior theory (Beck, 1976) and rational-emotive theory (Ellis, 1980); metacognitive theory emphasizes the role of control of thinking rather than content of cognitive biases or irrational beliefs in the causality of psychological disorder (Fisher & Wells, 2009). According to this theory, maladaptive thoughts and negative emotions are derived from metacognitions that are distinct from automatic thoughts or beliefs stressed in other cognitive theories (Wells, 2009).

Metacognition is defined as “stable knowledge or beliefs about one’s own cognitive system, and knowledge about factors that affect the functioning of the system; the regulation and awareness of the current state of cognition, and appraisal of the significance of thought and memories” (Wells, 1995, p. 302). This is a multidimensional concept covering three basic domains: metacognitive knowledge, metacognitive experience and metacognitive regulation (Flavell, 1979).

Metacognitive knowledge refers to beliefs, information that person has about own cognitive abilities, about cognitive strategies and about tasks (Flavell, 1979). It is subcategorized into two types of metacognitive knowledge; namely, declarative beliefs including conscious and verbally expressible beliefs such as “I am a failure”; and procedural beliefs or plans that guide cognitive processes and self-regulatory strategies such as selective attention, memory retrieval, appraisal of stimuli (Wells & Matthews, 1996). Those beliefs are stored in memory either accurately or not, and can be triggered consciously or automatically by retrieval cues. The activation of these beliefs affects cognitive processing during monitoring, appraising and controlling cognition (Wells, 1997). Fisher & Wells (2009) indicated that these meta-beliefs can be positive regarding on advantages of worrying, threat monitoring and controlling of cognition or can be negative in concerning the uncontrollability of thoughts and importance of dangerous consequences.

Metacognitive knowledge is affected by second domain, namely, metacognitive experiences which make addition, deletion or revision on these beliefs (Flavell, 1979). Metacognitive experience incorporates affective experiences operated through appraisals about the meaning of thoughts, metacognitive feelings themselves, and the status of cognition. These metacognitive appraisals are

considered as conscious interpretations of cognitive experiences (Fisher & Wells, 2009).

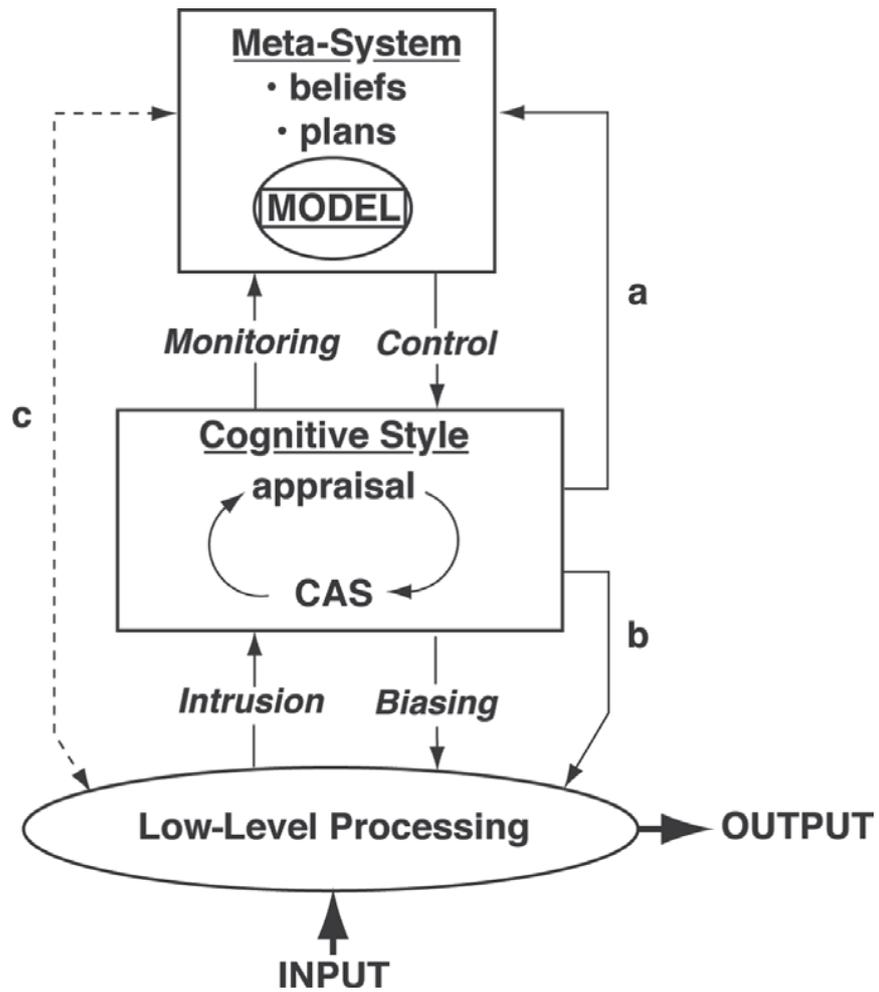
The third category of metacognition is metacognitive regulation. This regulation refers to executive processes that coordinate cognitive system. These executive functions include two types of processes, namely bottom-up processes called cognitive monitoring such as error detection, source monitoring in memory retrieval, and top-down processes called cognitive control such as inhibitory control, error correction, planning (Fisher & Wells, 2009) .

### **1.1.1 Self Regulatory Executive Function (S-REF) model**

The role of metacognition in development and maintenance of psychological disorder is explained by Self Regulatory Executive Function (S-REF) model (Wells & Matthews, 1996). According to S-REF Model, the maintenance of psychological disorder is accounted by dysfunctional information processes, particularly top-down processes and self-regulatory strategies. In other words, unlike other cognitive models, S-REF model does not attribute the source of the problem to negative automatic thoughts or content of the unconscious dysfunctional schemas, but it concerns the ways of person responding to these thoughts (Fisher & Wells, 2009). It is suggested that individual's dysfunctional styles of coping strategies with distressful thoughts and emotions inadvertently lead intensification and perseveration of psychological disturbance.

The mechanism of S-REF model in problematic information processing is based on three interacting levels of cognition (see Figure 1). The first level is reflexive and automatic processing which is almost unconscious. This automatic processing may be responsible for intrusions becoming conscious by selective

attention. The second level is attentionally demanding, voluntary processing. The processes in this level are conscious and responsible for regulating and executing appraisals and coping actions. The final level is stored knowledge or self-beliefs (Wells & Matthews, 1996). In online processing, the model offers the continuous dynamic interaction between controlled processing and autonomic processing in which both of them are guided by stored metacognitive knowledge. According to this model, negative automatic thoughts and dysfunctional schemas are considered as outputs of processing, therefore it is emphasized the style of thinking and metacognition in development of psychological disorders which also shape these beliefs (Fisher & Wells, 2009). This distinctive feature of metacognitive theory which separates cognition into cognitive and metacognitive systems is explained by suggesting two modes of processing in experiencing thoughts, namely; object mode and metacognitive mode. The object mode is related with experiencing thoughts as external events and facts without questioning the validity or separation between self as observer and the act of thinking itself. On the other hand, metacognitive mode is a former style of experiencing thought in which the person gives up a space from the belief and can evaluate its validity. Shifting from objective mode to metacognitive mode in dealing with negative events or beliefs, helps a person to avoid automatically activate dysfunctional coping strategies (Wells, 2000; Fisher & Wells, 2009).



**Figure 1.** The mechanism of S-REF model in psychological disorder (Wells, 2009).

### 1.1.2 Cognitive Attentional Syndrome (CAS)

In terms of vulnerability in development, maintenance and also relapse of psychological disorders, the focus of S-REF model is an activation of a toxic style of thinking and ineffective coping styles in the form of repetitively focusing on negative beliefs and threat (Wells, 2009). This style is called Cognitive Attentional Syndrome (CAS) consisted of metacognitive beliefs and strategies such as focusing on sources of threat, persistent thinking in the form of rumination and

worry, and selecting maladaptive coping strategies (Wells, 2000; Wells & Matthews, 1996). For instance; a person suffering from PTSD is likely to have both positive metacognitive beliefs about the meaning of worry with focusing on threat (e.g. “Worry is useful in making me prepared for future traumatic events”) and negative metacognitive beliefs about the consequences of thoughts and control over them (e.g. “I am going to be crazy, if I continue to think like this” or “I cannot control over my worrying”). Dysfunctional coping strategies accompany to these beliefs such as repeated thinking about the trauma event, focusing attention on threat, and also trying to suppress intrusions or avoidance (Wells, 2000). Therefore the activation of CAS leads preservation and intensification of emotional distress and impairment in effective self-processing of thought and emotions and experiencing corrective information (Fisher & Wells, 2009).

Although there are different metacognitive models for specific psychological disorders, the common focus of S-REF model is the beliefs and knowledge about own cognitive processing-meta knowledge- and dysfunctional response styles to negative thoughts and events -metacognitive regulation- (Wells, 2000). Cartwright-Hatton and Wells (1997) introduced five major groups of metacognition associated with psychological dysfunctions in Metacognitions Questionnaire; namely, 1) positive beliefs about worry which is related to extent that a person believes that worry or rumination is useful; 2) negative beliefs concerning the uncontrollability of thought and danger, i.e. to what extent that a person believes that he/she has no control over danger or his/her repeated thinking; 3) cognitive confidence which is about one’s cognitive efficiency in terms of attention and memory; 4) negative beliefs about need to control thoughts, which is related with to extent that a person

believes that having such anxious thoughts may lead to harmful outcomes, so they should be suppressed; 5) cognitive self-consciousness that is about the tendency to focus attention on one's own thinking processes and monitor own thoughts.

### **1.1.3 Metacognitive Theory and Psychological Well-Being**

The running of S-REF model is empirically validated in studies indicating that metacognitions are positively associated with the development of generalized anxiety disorder (Wells & Carter, 2001), pathological worry (Cartwright-Hatton & Wells, 1997), obsessive-compulsive disorder (Wells & Papageorgiou, 1998), posttraumatic stress disorder (Wells, 2000), hypochondriasis (Bouman & Meijer, 1999), test anxiety (Spada, Nikcevic, Moneta, & Ireson, 2006), auditory hallucinations in schizophrenic patients (Lobban, Haddock, Kinderman, & Wells, 2002), perceived stress (Spada, Nikcevic, Moneta, & Wells, 2008), Trait Anxiety (Spada, Georgiou, & Wells, 2009), and also smoking dependence (Spada, Nikcevic, Moneta, & Wells, 2007).

On the other hand, limited studies indicate that specific metacognitions are significant to some psychological problems. For instance, while generalized anxiety disorder (GAD) is more likely to be associated with negative beliefs concerning uncontrollability of thoughts and danger and lack of cognitive confidence; obsessive-compulsive disorder (OCD) is more likely to be characterized with cognitive self-consciousness (Barahmand, 2009; Bruin, Muris, & Rassin, 2007). Moreover, Davis and Valentiner (2000) indicated that the most discriminant metacognition of GAD patients from nonclinical groups are the negative beliefs concerning uncontrollability of thoughts and danger. On the other hand, in practical implications for

metacognitive treatment, it is emphasized focusing on modification of cognitive self-consciousness in social phobia, and challenging positive beliefs about worry and negative beliefs concerning uncontrollability of thoughts and danger in GAD (Wells, 2002).

## **1.2 Coping Strategies**

Over the last 40 years, coping processes have gained attention in understanding major factors related with adjustment outcomes including both psychological and physiological well-being, also behavioral and social functioning (Lazarus & Folkman, 1987). Coping is defined as cognitive and behavioral efforts engaged by individual to manage, to tolerate or to lessen demands which have internal or external sources and which may exceed the individual's abilities (Lazarus & Folkman, 1984). The major assumption of coping processes is that cognitive appraisals have mediator roles between encountering a situation and experiencing an emotion (Lazarus & Folkman, 1987). Cognitive appraisals include a variety of evaluations about the encountered situation and availability of resources to deal with this situation and are operated at two steps (Lazarus & Folkman, 1984).

The first steps called primary appraisals include the evaluations about the situation in terms of risks, benefits or relevance and significance to individual's well-being, goals or values. Primary appraisals are formed by both environmental and personal factors. Environmental factors are related with nature of familiarity of threat and probability of occurrence. In addition, personal factors such as general belief systems or level of commitment also effect primary appraisals (Folkman, 1984). The individual is not likely to engage any coping processes if the situation is considered

as having benefits and positive outcomes or having no effect on him/her. However, if the situation is considered as having some risks such as potential harm or loss for loved-one, threat for physical well-being or self-esteem, the person is more likely to engage in some effort to deal with the situation and evaluate resources to cope with it; these additional efforts are called as secondary appraisals (Lazarus & Folkman, 1984).

The second group called secondary appraisals have a focus whether something can be done to manage the stressful situation or demands; and what the available resources and options are. Before considering the options, it is important to determine stressful appraisals namely; threat, harm or loss, and challenge. Although harm or loss is appraised after the damage has been done; threat is associated with the consideration of a potential for harm or loss and both have negative outcomes such as fear, anger or anxiety. On the other hand, challenge has an expectation of potential gain or growth, so it is related with positive emotions such as interest and excitement (Lazarus, 1993). Then, the individual evaluates the available options and adequacy of resources. These resources can be social such as emotional support from family, friends or social agencies; can be physical including material or concrete support; and can be personal such as traits and attitudes including self-esteem, optimism, sense of control, and also previous successful coping experiences (Lazarus & Folkman, 1984; (Sarason, Levine, Basham, & Sarason, 1983)

These two cognitive processes are interdependent in producing the outcome of coping. This means that; the adequacy of resources and available options has considerable effects to lessen the degree of threat appraisal. On the other hand, the

strength of threat or harm may be increased due to the lack of appropriate coping strategies (Lazarus & Folkman, 1984).

The major functions of coping strategies are the regulation of emotions and mastering of stressful situation. According to these functions, coping strategies are basically categorized into two groups; namely, problem-focused coping and emotion-focused coping (Lazarus, 1993). Problem-focused coping strategies are direct attempts to handle stressful situation itself including active decision-making, problem-solving activities and changing the situation. This type of coping is closely related with a sense of control over the situation. On the other hand, the major function of emotion-focused coping is to deal with the distressful emotions with some activities such as reinterpreting the meaning of event, disengagement, isolation, denial, seeking social support (Lazarus, 1993; Portello & Long, 2001). The categorization of coping strategies shows variety in the literature. For instance, in addition to these categories, Gençöz, Gençöz, & Bozo (2006) suggested the third group named indirect coping referring seeking social support as separate category.

Both situational (e.g. complexity and familiarity of problem) and personal factors (appraisals) dynamically determine the use of different coping strategies at various stressful situations. The individual may prefer to use same strategies for all situations or choose different strategies for the same problem (Folkman & Lazarus, 1985). Lazarus and Folkman (1984) pointed out that some coping strategies are not inherently more adaptive than others; rather coping is considered as effective when there is a fit between situational appraisals and choice of coping.

Nonetheless, there are some findings indicating that some coping strategies are more likely to be engaged in by the group of people who have a particular

psychological problem; while others are positively associated with psychological well-being. For instance, clinically depressed individuals are more likely to engage in emotion-focused strategies such as escape-avoidance, wishful thinking; and less likely to engage problem-focused strategies (Coyne, Aldvin, & Lazarus, 1981; Felsten, 1998). Furthermore, rumination and self-blame tend to be higher among depressive adults than non-clinical adults (Nolen-Hoeksema, Larson, & Grayson, 1999).

Still, there is a need of investigation of role of coping strategies in terms of vulnerability and resiliency factor for specific psychological symptoms. In addition, it is also needed to examine the relationship of coping strategies with other vulnerability and resiliency factors for emotional disorders to understand why some of people experiencing high levels of stress develop psychological symptoms, while the others do not.

### **1.3 Psychological Symptoms Examined in the Present Study**

Psychological symptoms that will be examined in the present study include anxiety, depression, pathological worry, and social anxiety.

#### **1.3.1 Anxiety**

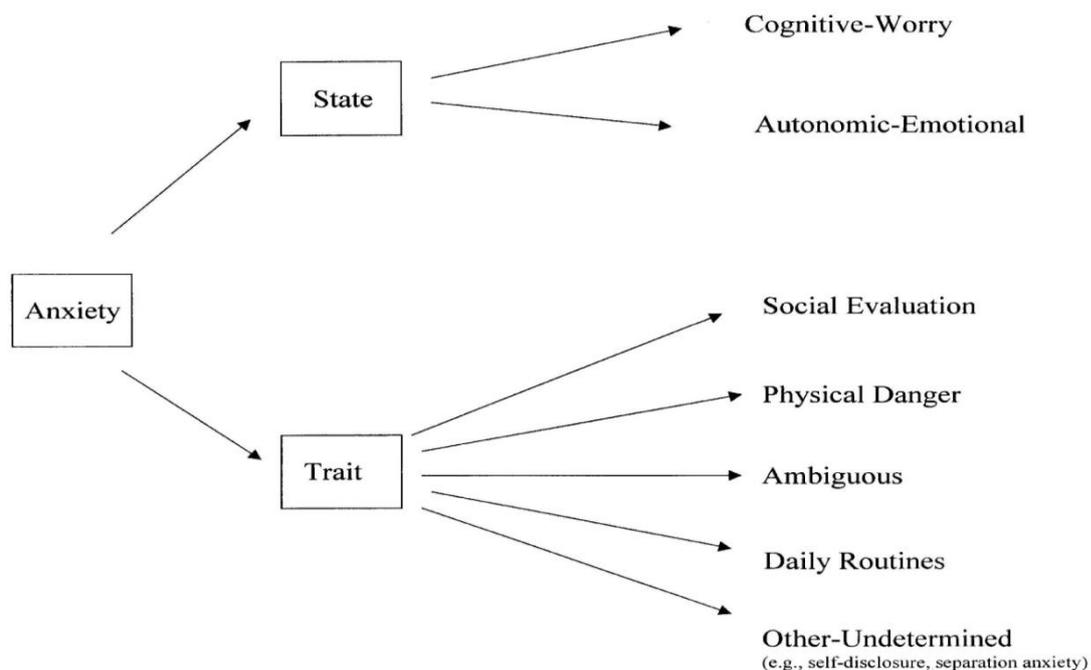
Anxiety is an emotional experience characterized by distress and agitation, and accompanies the perception of danger. Although fear and anxiety have some common features, they are not the identical terms. Fear is more likely to be defined as cognitive experience that includes cognitive appraisals of threat, and anxiety is considered as emotional response to these appraisals (Beck & Emery, 1985). Therefore, fear is the immediate perception of present threat or danger. On the other hand, anxiety involves further appraisals after the fear perception is activated and it

is closely related with sense of uncontrollability for both current and upcoming threats (Barlow, 2000).

The nature of anxiety has evolutionary function in survival in which humans are inherently equipped to respond automatically to threats. This normal reaction is considered as abnormal or pathological when there is distortion or misapplication of the real nature of the threat (Barlow, 2000; Beck & Emery, 1985). Fourth edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, American Psychiatric Association, 1994) lists 12 specific anxiety disorders, including acute stress disorder, post-traumatic stress disorder, social phobia, agoraphobia, specific phobia, anxiety disorders due to the medical conditions, generalized anxiety disorder, obsessive-compulsive disorder, and panic disorder. Furthermore, most of the other group of psychological disorders such as somatoform disorders, psychotic disorders and mood disorders has comorbidity with a type of anxiety symptom (DSM-IV, American Psychiatric Association, 1994).

Since anxiety is significantly related with most of the psychological disorders, it is important to understand its nature and function. Cattell and Scheier (1961) proposed two dimensions of anxiety; namely, state anxiety and trait anxiety (Spielberger, Gorsuch, & Lushene, 1970). State anxiety is defined as temporal experience including activation of autonomic nervous system, subjective feelings of worry, tension, nervousness and apprehension. It is emphasized that this type of anxiety is not stable in terms of intensity, rather it show fluctuations as a function of perceived threat (Spielberger et al., 1970). On the other hand, trait anxiety is more likely to present an individual's predisposition that is stable. It represents the individual's proneness to anxiety stemmed from genetic, physiological or

psychological factors during lifetime. Therefore, people with high level of trait anxiety are more likely to develop an anxiety disorders or experience chronic anxiety (Eysenck, 1992).



**Figure 2. The multidimensionality of state and trait anxiety (Endler & Kocovski, 2001).**

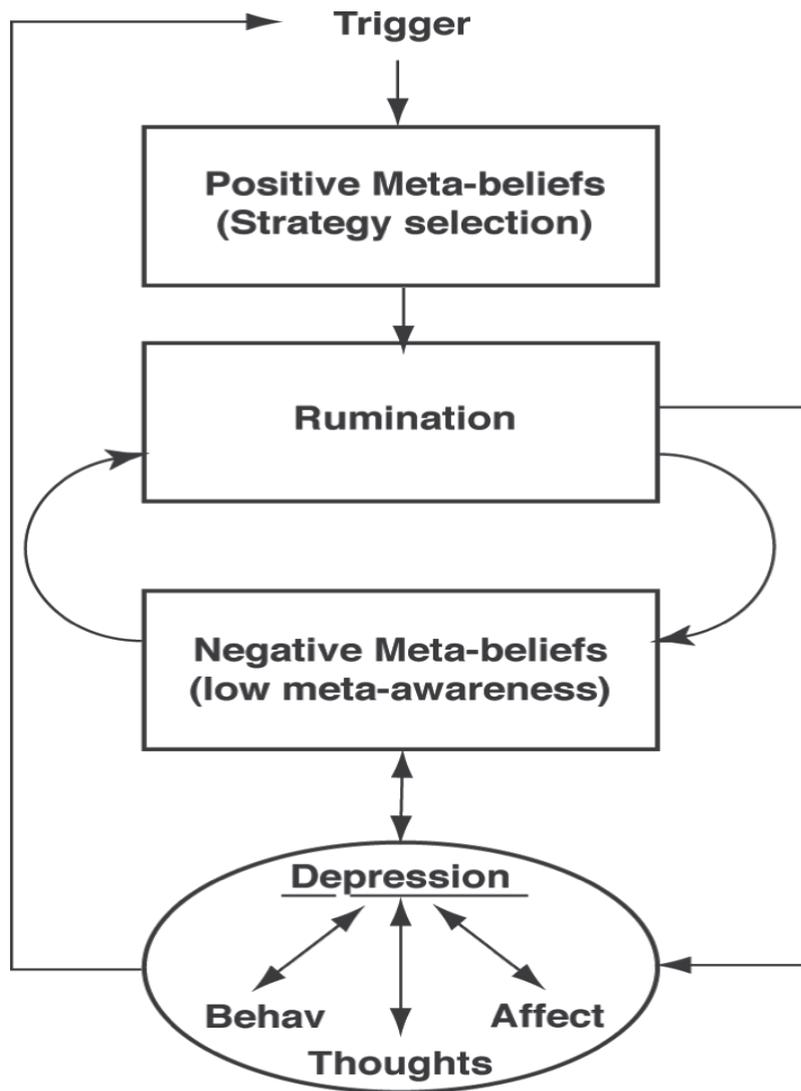
### 1.3.2 Depression

Depression is defined as a period of depressed mood or loss of interest and motivation in daily activities at least for two weeks. It is also required four further symptoms for diagnosis involving loss of energy, insomnia or hypersomnia, feeling of guilt or worthless, loss of concentration, persistent thoughts about death and suicide, psychomotor agitation or retardation, and these symptoms must experienced for at least 2 weeks (DSM-IV, American Psychiatric Association, 1994).

Depression is a common psychological disorder which is mostly triggered by negative events; and may lead to significant impairments in individual's daily functioning. However, there are individual differences in responding to such negative events or stress. Cognitive theory focuses on cognitive appraisals in order to explain such individual differences (Beck, 1972). The major cognitive vulnerability factors of depression are grouped as negative schemas and cognitive biases. Negative schemas including automatic thoughts and core beliefs represent cognitive distortions about the self, others and the world. On the other hand, cognitive biases are more likely to be related to misinterpretation of events and situations (Clark & Beck, 1999). In an effective cognitive therapy for depression, the focus should be on questioning these evidences for these negative schemas and cognitive biases (Wells, 2009).

In addition, maladaptive responses in the form of rumination are also regarded as important feature of depression (Nolen-Hoeksema, 1991; Wells, 2009). Similarly; based on metacognitive theory, Wells (2009) indicated that depressive individuals engage in rumination of negative thoughts and emotions; and thought monitoring focusing on inner depressive symptoms and mood changes. The activation of these processes lead to maladaptive coping strategies such as avoidance; so leads to intensification and maintenance of depression (see Figure 3). Therefore, in an effective therapy, positive beliefs about worry (e.g. "Thinking pessimistically will stop me being disappointed") should be challenged so that the activation of negative beliefs concerning uncontrollability of thoughts and danger (e.g. "I have no control over my mind and mood) will be prevented. Unlike other traditional

cognitive theories, metacognitive therapy do not focus on content of negative schemas, rather major concern is the modification of maladaptive beliefs about rumination (Wells, 2009).



**Figure 3. The metacognitive model of depression (Wells, 2009).**

### **1.3.3 Social Anxiety**

Social phobia or social anxiety disorder is a common psychological problem which is characterized with excessive discomfort or fear in the anticipation of social or performance situations which have possibility of embarrassment (DSM-IV, American Psychiatric Association, 1994).

Social phobia is a common psychological problem which leads severe impairments in individual's relational, occupational functioning and also on well-being (Schneier, Heckelman, Garfinkel, Campeas, Fallon, Gitow, Street, Del Bene, & Liebowitz, 1994). Social anxiety may accompany to various performances such as public speaking, drinking or eating in public, meetings with unfamiliar people, and it is very common that individuals suffering from anxiety disorders show social skills deficiency (DSM-IV, American Psychiatric Association, 1994; Holt, Heimberg, Hope, & Liebowitz, 1992).

Cognitive theory emphasizes the sensitivity and preoccupation of physiological symptoms such as trembling and sweating; ongoing performance and other people's evaluations (Hartman, 1983). In addition, Wells (2009) proposed the metacognitive model for social phobia underlying the role of worry and rumination as cognitive attentional syndrome (CAS). According to this theory, individual with social phobia has positive beliefs about focusing on threat (in this case, social situation or performance is considered as threat or danger itself) in order to be prepared for possible mistake and humiliation. On the other hand, this person has also a perception that this worry is uncontrollable. As a result, the activation of these beliefs leads to intensification and persistency of anxiety, because they prevent

person being fully exposed to phobic situations that may provide challenge to his/her fears (Wells, Clark, Salkovskis, Ludgate, Hackmann, & Gelder, 1995).

#### **1.3.4 Worry**

Although worry itself is considered as a normal cognitive response in daily life, it may lead to serious impairments in functioning. This interfering type of worry is called excessive or pathological worry, and it is found to be significantly related with experiencing distress and psychological symptoms (Matthews, 1990). Excessive worry is represented as an important feature for most of the psychological disorders such as obsessive-compulsive disorder (OCD), panic disorder, social phobia, depression, and especially generalized anxiety disorder (GAD) which is specifically characterized as excessive and uncontrollable worry (DSM-IV, American Psychiatric Association, 1994; Chelminski & Zimmerman, 2003).

In order to understand the role of worry in psychological disorders, Wells and Morrison (1994) emphasized to clarify the differential features between normal worry and pathological worry. It is suggested that unlike pathological worry, normal type is more likely to be verbal, realistic and less likely to be experienced involuntarily. In addition, Wells and Matthews (1994) proposed that worry can be adaptive or maladaptive in terms of its function. Whereas, adaptive worry is characterized with problem-solving orientation which leads to problem-focused behaviors; maladaptive worry is responsible from producing negative outcomes in which its focus becomes the worrying itself and it is used to cope with danger or threats.

According to metacognitive theory, worry is activated as a coping strategy in response to a negative thought. Worry about external events and situations including danger or possible threat, is labeled as “Type 1 Worry” and it may not be a problem for individual, because it is considered as effective in dealing with danger. Positive metacognitions about worry is related with the use of Type 1 Worry (e.g. “Worry helps me be prepared for future threats”). On the other hand; worry resulted from negative appraisals of own cognitive processes or worry about worry is labeled as Type 2 Worry and it is related intensification of distress and anxiety. Type 2 Worry is also referred as meta-worry, because it involves negative metacognitive appraisals (i.e. “I am going crazy because of worry” or “I have no control over by thoughts”) (Wells, 1994). The activation of meta-worry leads person engage in maladaptive coping strategies such as distraction, thought suppression, avoidance and substance abuse (Wells, 2000).

In metacognitive theory, worry is represented as essential component of cognitive attentional syndrome (CAS) in contributing to most of the psychological disorders (Wells, 2009). Especially in conceptualizing general-anxiety disorder (GAD), worry related metacognitions including beliefs, appraisals and coping strategies are considered as central factors in developing and maintenance of this disorder (Wells, 1995). According to this perspective, the main problem is not the maladaptive beliefs about danger in the world; rather it is related with conscious, motivated styles of thinking for appraisal and coping with threat that is stemmed from person’s beliefs. There are two significant metacognitions associated with development of GAD; namely, the negative beliefs concerning uncontrollability of

thoughts and danger; and beliefs about need to control thoughts (i.e. focusing the negative consequences of worrying). The activation of these metacognitions lead to distortions in appraisals of worry and person is stuck in worrying about worry which results in intensification of distress and feelings about inability to cope (Wells, 2009). This vicious cycles is not specific to GAD, rather the intensification and persistency of most psychological disorders is resulted from these maladaptive cognitive patterns (Wells, 2000).

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

The empirical studies are limited in investigating the relationship between metacognition and initiated coping strategies on psychological symptoms. Matthews, Hillyard, & Campbell (1999) revealed that there is significant and positive relationship between maladaptive coping strategies and metacognitions in test anxiety situation. That is, among children suffering from test anxiety, using task-focus coping strategies during examination settings tend to be positively correlated with high level of cognitive self-consciousness, whereas emotion-focus coping strategies and avoidance are more significant with lack of cognitive confidence.

In addition, it was established that there is a significant relationship between metacognitions and coping strategies in predicting worry and obsessive-compulsive symptoms; that is, positive beliefs about worry is positively correlated with maladaptive coping strategies, while cognitive-self consciousness and distraction as a thought strategy seems to assist adaptive coping styles (Sica, Steketee, Ghisi, Chirl and Franceschini, 2007). Therefore, it is important to demonstrate which types of

metacognition and which control strategies are more significant and/or useful to understand a particular psychological symptom.

Based on these assumptions, the present study has the following specific aims:

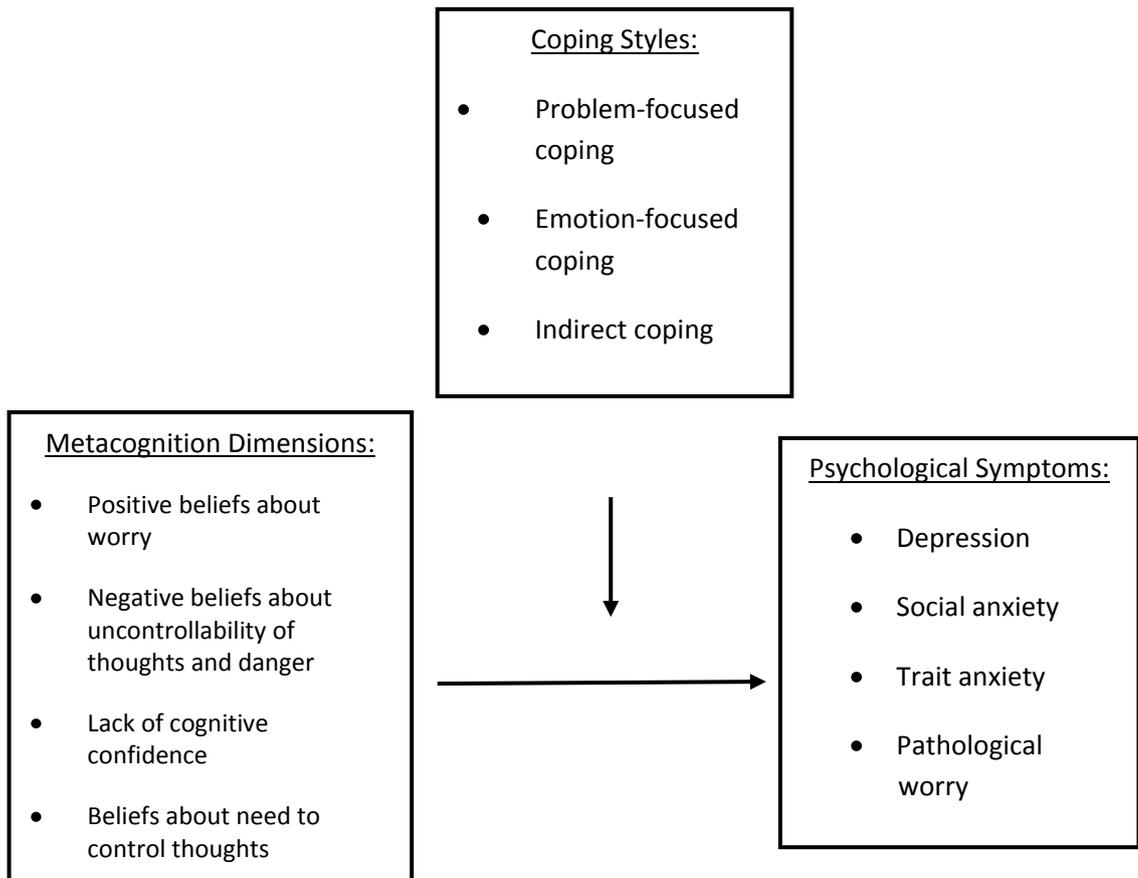
- (1) To examine possible influences of demographic variables of sex, employment status, father's education, response style of measures on different psychological symptoms (i.e. anxiety, depression, worry and social worry).
- (2) To examine possible influences of demographic variables of sex, employment status, father's education, response style of measures on metacognitions [i.e. Positive Beliefs about Worry (MCQ-1), Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2), Lack of Cognitive Confidence (MCQ-3), Beliefs about Need to Control Thoughts (MCQ-4) and Cognitive Self-Consciousness (MCQ-5)].
- (3) To examine possible influences of demographic variables of sex, employment status, father's education, response style of measures on coping strategies (i.e. Problem- Focused, Emotion-Focused and Indirect Coping).
- (4) To examine the associations between specific type of metacognition [i.e. Positive Beliefs about Worry (MCQ-1), Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2), Lack of Cognitive Confidence (MCQ-3), Beliefs about Need to Control Thoughts (MCQ-4) and Cognitive Self-Consciousness (MCQ-5)], and specific source of anxiety (i.e. trait anxiety, worry and social anxiety) and depression.
- (5) To examine the associations between coping strategies (i.e. Problem- Focused, Emotion-Focused and Indirect Coping) and psychological symptoms (i.e. trait

anxiety, depression, worry and social anxiety) after controlling the metacognitions.

- (6) To examine the moderator role of coping strategies (i.e. Problem-Focused, Emotion-Focused and Indirect Coping) for unique contribution of specific metacognition on different psychological symptoms, namely; depression, social anxiety, trait anxiety, and pathological worry.

According to these aims, main hypotheses of the study are:

- i. Certain types of metacognitions will be more relevant for some psychological symptoms than others.
- ii. Different types of metacognition will be related with engaging different coping strategies.
- iii. Different coping strategies will be more significant for some psychological symptoms than others.
- iv. The association between different types of metacognitions and psychological symptoms will be moderated by different kinds of coping styles. That is, the associations between metacognitions and psychological symptoms will vary with different kinds of adopted coping styles (see Figure 4.)



**Figure 4. Model that will be tested in the study: Interactions between types of metacognition and coping strategies in the relation with different psychological symptoms.**

## CHAPTER II

### METHOD

#### 2.1 Participants

In the present study, as shown in Table 1, 435 participants (267 females and 168 males) agreed to take part, whose ages were between 18 and 35 ( $M = 23.84$ ,  $SD = 3.11$ ). Among the participants, 53.1% ( $N = 231$ ) participated via mail and 46.9% ( $N = 204$ ) chose paper-pencil style.

These participants were from either Ankara or Istanbul and participated to study via snowball technique. Among these participants, 58.2% ( $N = 253$ ) live with parents, 33.1% ( $N = 144$ ) stay with friends, 7.1% ( $N = 31$ ) stay alone, and 1.6% ( $N = 7$ ) stay with relatives. According to employment status of sample, 56.6% were student ( $N = 246$ ), 41.4% were employed ( $N = 180$ ).

Regarding education level of participants, 6.2% ( $N = 27$ ) were graduate of high school, 78.6% ( $N = 342$ ) were either university students or university graduates, and 15.2% were post-graduates ( $N = 66$ ). As for mother's education level, 36.7% ( $N = 160$ ) were graduate of high school or below, and 63.3% ( $N = 275$ ) were graduate of college or above. As for father's education level, 55.9% ( $N = 243$ ) were graduate of high school or below, and 43.9% ( $N = 191$ ) were graduate college or above.

According to the existence of past and current psychological problem of participants, 15.6 % ( $N = 68$ ) had taken psychological help at least once in lifetime, 84.4 % ( $N = 367$ ) had never taken psychological help.

Among these demographic features, response style, gender, employment status and father's education were taken as demographic variables in the analyses because of their relatively equal distributions.

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

<b>Variables</b>	<b>N</b>	<b>%</b>
<b>Response Style</b>		
Mail	231	53.1
Paper-pencil	204	46.9
<b>Gender</b>		
Male	168	38.6
Female	267	61.4
<b>Employment Status</b>		
Student	246	56.6
Employed	180	41.4
<b>Education Level</b>		
High School	27	6.2
University	342	78.6
Post-Graduate	275	63.3
<b>Mother's Education</b>		
(Low) Graduate of high school or below	160	36.7
Graduate of college or above (High)	275	63.3
<b>Father's Education</b>		
(Low) Graduate of high school or below	243	55.9
Graduate of college or above (High)	191	43.9

## 2.2 Materials

In the present study, materials included Demographic Information Form (see Appendix A), State-Trait Anxiety Inventory-Trait Form (see Appendix B), Beck

Depression Inventory (see Appendix C), Penn State Worry Questionnaire (see Appendix D), Liebowitz Social Anxiety Scale (see Appendix E), Metacognitions Questionnaire-30 (see Appendix F), and The Ways of Coping Checklist (see Appendix G).

### **2.2.1 Demographic Information Form**

This form was structured by researcher in order to record information about participants' age, gender, employment status, education level, mother's and father's education level, the existence of past or current psychological diagnosis/ treatment.

### **2.2.2 State -Trait Anxiety Inventory-Trait Form**

State-Trait Anxiety Inventory-Trait Form (STAI-T; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) consists 20 items to measure individual's proneness to anxiety. The items are rated on four-point Likert scale ranging from 1 "not at all" to 4 "very much so" according to how respondent generally feels about the statements. Internal consistency (with alphas ranged from .86 to .95) and test-retest reliability (with alphas ranged from .65 to .75) coefficients were very good (Spielberger et. al, 1983). In this study Turkish version of this scale was conducted that was translated by Öner and Lecompte (1985). In Turkish version, the internal consistency coefficients ranging from .83 to .87 and test-retest reliability ranging from .71 and .86 were found to be satisfactory. Furthermore, the correlation between Turkish version of STAI and Beck Depression Inventory was found to be .53. In terms of validity, STAI-T scores of clinical sample were found to be significantly higher than nonclinical control group.

### **2.2.3 Beck Depression Inventory**

Beck Depression Inventory (BDI; Beck, Rush, Shaw, & Emery, 1979) was designed to measure severity of depression related with the affective, cognitive, behavioral, and motivational symptoms as well as suicidal wishes. The scale consists 21 items rated on four-point Likert scale. Scores for each item range from 0 to 3. The scores above 17 are considered as an indication of clinical depression (Hisli, 1989). The reliability of scale with coefficient alpha reported as .86 in clinical population and .81 in nonclinical population was established (Beck, Steer, & Garbin, 1988). In the current study, The Turkish version of this scale was used adapted by Hisli (1988). In this version, reliability was found to be .74 and criterion validity was .63 in clinical sample in the assessment of correlation MMPI with BDI (Hisli, 1989).

### **2.2.4 Penn State Worry Questionnaire**

Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990) was designed to assess proneness to worry in terms of uncontrollability of trait like worry, frequency and intensity. PSWQ consists 16 items rated on five-point Likert scale ranging from 1 “not at all typical” to 5 “to very typical” with satisfying psychometric properties as internal consistency, test-retest reliability and discriminant validity. In the present study, the Turkish version of the scale that was adapted by Yilmaz, Gencoz & Wells (2008) was administered. In this version, it has been found to have high internal consistency (with Cronbach’s alpha .91), Guttman split-half reliability with .91, test-retest reliability with alphas .88, as well as supported convergent validity with STAI-T, BDI, Beck Anxiety Inventory (BAI) and Padua Inventory-Washington State University Revision (PI-WSUR).

### **2.2.5 Liebowitz Social Anxiety Scale**

Liebowitz Social Anxiety Scale (LSAS; Liebowitz, 1987) was developed to measure the level of individual's experiences of anxiety and avoidance in a number of typical social and performance situations. The measure includes 24 items establishing satisfying reliability and validity with subscales of the degree of anxiety and the degree of avoidance. The Turkish version of the scale was adapted by Soykan, Özgüven, & Gençöz (2003). This version indicated high interrater reliability (.96), test-retest reliability (.97), and internal consistency (.98) coefficients. Furthermore, the measure had satisfactory convergent and discriminant validity with Beck Anxiety Inventory; and good criterion validity in which people with the diagnosis of generalized social phobia were found to be significantly discriminated both from normal control participants and people with diagnosis of anxiety disorder other than generalized social phobia.

### **2.2.6 Metacognitions Questionnaire-30**

Metacognitions Questionnaire-30 (MCQ-30; Wells & Cartwright-Hatton, 2004) consisting of 30 items was designed to measure individual differences in metacognitive beliefs, judgments and processing tendencies considered as important for vulnerability and development of psychological disorders in Metacognitive Theory. The items of MCQ-30 are rated on a four-point Likert scale; from 1 "do not agree" to 4 "totally agree" and are loaded in five conceptually distinct but intercorrelated factors, namely; 1) positive beliefs about worry (e.g. "worry helps me cope"); 2) negative beliefs concerning uncontrollability of thoughts and danger (e.g. "when I start worrying I cannot stop"); 3) lack of cognitive confidence (e.g. "my memory can mislead me at times"); 4) beliefs about need to control thoughts (e.g.

“not being able to control my thoughts is a sign of weakness”); and 5) cognitive self-consciousness (e.g. “I pay close attention to the way my mind works”). The original MCQ-30 indicated good internal consistency (alpha ranged from .72 to .93) and convergent validity, as well as acceptable test–retest reliability (Cartwright-Hatton & Wells, 2004). In the current study, The Turkish version of this scale was conducted adapted by Yılmaz, Gençöz, and Wells (2008) in which it has been indicated that the measure had high test-retest reliability (Cronbach’s alpha .87), internal consistency (coefficients from .73 to .89), as well as satisfying convergent validity with positive correlations between total MCQ-30 and STAT-T, BDI, BAI, PSWQ, PI-WSUR.

### **2.2.7 The Ways of Coping Checklist**

The Ways of Coping Checklist (TWCI, Folkman & Lazarus, 1980, Siva 1991) consists of 74 items to assess a wide range of cognitive and behavioral coping strategies which individuals engage in dealing with stressful situations. Items on this scale rated on five-point Likert scale ranging from 1 “not at all typical” to 5 “to very typical” and are loaded in 2 distinct factors, namely; problem-focused coping which refers to engaging direct activities with the aim of reducing stress and emotion-focused coping refers to ineffective strategies focusing on alleviating negative emotions such as distancing or avoidance. The reliability was established with the overall Cronbach alpha coefficient of .90. In the present study, the Turkish version of the scale was carried out in which 3 higher-order factor analyses were conducted by Gençöz, Gençöz & Bozo (2006). In this analysis, Gençöz et. al (2006) determined three factors; namely, problem-focused, emotion focused and indirect coping (related to seeking social support) and psychometric properties were established as satisfactory and valid with good internal consistency (alphas from .84 to .90). In

terms of criterion validity, Problem-Focused Coping was found to be significantly and negatively correlated with for sociotropy, trait anxiety, submissiveness, and external locus of control; and positively correlated with autonomy measure. Emotion-Focused Coping was reported positively correlated with sociotropy, trait anxiety, submissiveness and external locus of control; and negatively correlated with the autonomy measure. Finally, Indirect Coping was found to be positively correlated with sociotropy and negatively correlated with autonomy measure.

### **2.3 Procedure**

Before administration of instruments, necessary permission was taken from Middle East Technical University Ethical Committee. Following, a group of questionnaires were applied to participants via mail or paper-pencil by snowball technique. After receiving and signing informed consent, it took participants about 30-45 minutes to complete the questionnaires.

### **2.4 Analyses**

In the present study, in order to examine differences of demographic variables on the measures of the study, Independent Samples t-test and MANOVA were conducted. Furthermore, a zero order correlation was carried out among measures of the study (i.e. sources of anxiety and depression, types of metacognition and coping ways). Afterwards, associates of types of metacognition and moderation analyses were examined by various regression analyses.

## **CHAPTER III**

### **RESULTS**

#### **3.1 Descriptive Information for the Measures of the Study**

In order to examine the descriptive characteristics of the measures means, standard deviations, and minimum-maximum ranges were provided for State-Trait Anxiety Inventory-Trait Form (STAI-T); Beck Depression Inventory (BDI); Penn State Worry Questionnaire (PSWQ) with subscales of Presence of Worry and Absence of Worry; Liebowitz Social Anxiety Scale (LSAS) subscales namely, Fear or Anxiety and Avoidance; Metacognitions Questionnaire-30 (MCQ-30) with subscales including 1) positive beliefs about worry, 2) negative beliefs concerning uncontrollability of thoughts and danger, 3) lack of cognitive confidence, 4) beliefs about need to control thoughts, and 5) cognitive self-consciousness; The Ways of Coping Inventory (TWCI) with subscales of Problem-Focused Coping, Emotion-Focused Coping and Indirect Coping (see Table 1).

**Table 1. Descriptive Information for the Measures**

Measures	N	Mean	SD	Min-Max Values
<b>STAI-T</b>	435	41.70	7.76	22 - 65
<b>BDI</b>	435	9.15	7.22	0 - 43
<b>PSWQ</b>				
Presence of Worry	435	27.29	9.25	11 - 54
Absence of Worry	435	13.51	4.15	5-25
<b>LSAS</b>				
Fear or Anxiety	435	39.39	1.05	24 - 79
Avoidance	435	41.68	1.05	24 - 80
<b>MCQ-30</b>				
MCQ-1	435	11.33	3.77	6 – 23
MCQ-2	435	11.33	3.87	6 – 23
MCQ-3	435	10.76	4.09	6 – 24
MCQ-4	435	12.72	3.49	6 – 22
MCQ-5	435	16.29	3.62	6 – 24
<b>TWCI</b>				
Coping				
Problem-Focused	435	101.57	13.50	61 –139
Emotion-Focused	435	52.87	10.03	30 – 96
Coping				
Indirect Coping	435	39.44	7.25	12 – 60

Note: STAI-T = State-Trait Inventory-Trait Form, BDI = Beck Depression Inventory, PSWQ = Penn State Worry Questionnaire, LSAS = Liebowitz Social Anxiety Scale, MCQ-30 = Metacognitions Questionnaire-30, MCQ1 = positive beliefs about worry, MCQ2 = negative beliefs concerning uncontrollability of thoughts and danger, MCQ3 = lack of cognitive confidence, MCQ4 = beliefs about need to control thoughts, MCQ5 = cognitive self-consciousness, TWCI = Turkish Ways of Coping Inventory.

### 3.2 Psychometric Properties of the Scales

Regarding the psychometric characteristics of the measures, internal consistency (alpha) coefficients and range for item-total correlations were reported for all scales and their subscales (if available) (see Table 2).

### **3.2.1 Psychometric Properties of the State-Trait Anxiety Inventory-Trait Form (STAI-T)**

For State-Trait Inventory-Trait Form, the alpha coefficient was indicated to be .85, and item total correlations ranged between .33 and .55.

### **3.2.2 Psychometric Properties of the Beck Depression Inventory (BDI)**

For Beck Depression Inventory, the alpha coefficient was found to be .86, and item total correlations ranged from between .32 and .55.

### **3.2.3 Psychometric Properties of the Penn State Worry Questionnaire (PSWQ)**

Penn State Worry Questionnaire was examined with 2 subscales namely, Presence of Worry and Absence of Worry. For Presence of Worry subscale, the alpha coefficient was found to be .90, and item total correlations ranged from between .49 and .77. For Absence of Worry subscale, the alpha coefficient was indicated as .71, and item total correlations ranged from between .37 and .51.

### **3.2.4 Psychometric Properties of the Liebowitz Social Anxiety Scale (LSAS)**

Liebowitz Social Anxiety Scale was rated separately for Fear or Anxiety and Avoidance subscales. For Fear or Anxiety subscale, Cronbach's alpha was .90 and the item total correlations ranged from between .28 and .65. For Avoidance subscale, Cronbach's alpha was .88 and the item total correlations ranged from between .25 and .62. Finally, for total scale, Cronbach's alpha was .94.

### **3.2.5 Psychometric Properties of the Metacognitions Questionnaire-30 (MCQ-30)**

Metacognitions Questionnaire-30 had 5 subscales, named as 1) positive beliefs about worry, 2) negative beliefs concerning uncontrollability of thoughts and danger, 3) lack of cognitive confidence, 4) beliefs about need to control thoughts, and 5) cognitive self-consciousness. For Positive Beliefs about Worry subscale, the alpha coefficient was indicated as .87, and item total correlations ranged between .53 and .74. For Negative Beliefs Concerning Uncontrollability of Thoughts and Danger subscale, the alpha coefficient was found to be .81, and item total correlations ranged between .36 and .68. For Lack of Cognitive Confidence subscale, the alpha coefficient was found to be .85, and item total correlations ranged between .51 and .81. For Beliefs about Need to Control Thoughts subscale, the alpha coefficient was found to be .68, and item total correlations ranged between .28 and .51. Finally, for Cognitive Self-Consciousness subscale, the alpha coefficient was found to be .80, and item total correlations ranged between .35 and .65. For the total scale, the alpha coefficient was .82.

### **3.2.6 Psychometric Properties of the Ways of Coping Inventory (TWCI)**

Ways of Coping Inventory had 3 subscales namely, Problem-Focused Coping, Emotion-Focused Coping and Indirect Coping. For Problem-Focused subscale, Cronbach's alpha was found to be .88, the item total correlations ranged between .15 and .62. For Emotion-Focused subscale, Cronbach's alpha was found to be .81, the item total correlations ranged between .08 and .65. For Indirect Coping

subscale, Cronbach's alpha was found to be .82, the item total correlations ranged between .23 and .69. For the total scale Cronbach's alpha was determined .88.

**Table 2. Psychometric Properties of the Measures Used in the Study**

	<b>Internal Consistency (alpha) Coefficients</b>	<b>Item – Total Correlations Range</b>
<b>STAI-T</b>	.85	.33 - .55
<b>BDI</b>	.86	.32 - .55
<b>PSWQ</b>		
Presence of Worry	.90	.49 - .77
Absence of Worry	.71	.37 - .51
<b>LSAS</b>	.94	
Fear or Anxiety	.90	.28 - .65
Avoidance	.88	.25 - .62
<b>MCQ-30</b>	.82	
MCQ-1	.87	.53 - .74
MCQ-2	.81	.36 - .68
MCQ-3	.85	.51 - .81
MCQ-4	.68	.28 - .51
MCQ-5	.80	.35 - .65
<b>TWCI</b>	.88	
Problem-Focused		.15 - .62
Coping	.88	
Emotion-Focused		.08 - .65
Coping	.81	
Indirect Coping		.23 - .69

Note: STAI-T = State-Trait Inventory-Trait Form, BDI = Beck Depression Inventory, PSWQ = Penn State Worry Questionnaire, LSAS = Liebowitz Social Anxiety Scale, MCQ-30 = Metacognitions Questionnaire-30, MCQ1 = positive beliefs about worry, MCQ2 = negative beliefs concerning uncontrollability of thoughts and danger, MCQ3 = lack of cognitive confidence, MCQ4 = beliefs about need to control thoughts, MCQ5 = cognitive self-consciousness, TWCI = Turkish Ways of Coping Inventory.

### 3.3 Differences of Demographic Variables on the Measures of the Study

In order to determine how demographic variables differentiate on the measures (i.e., Well-Being Measures, Metacognitions, and Ways of Coping) of the

present study, separate t-test and multivariate analysis of variances were conducted. To be able to analyze the demographic variables as independent variables, initially they were categorized into two groups. These categorizations and the number of cases in each category (with their percentages) were given in Table 3. Subsequently, differences of these categorized demographic variables were examined on trait anxiety, depression, worry, social anxiety, metacognitions, and coping skills.

**Table 3. Categorization of the Demographic Variables**

<b>Variables</b>	<b>n</b>	<b>%</b>
<b>Response Style</b>		
Mail	231	53.1
Paper-pencil	204	46.9
<b>Gender</b>		
Male	168	38.6
Female	267	61.4
<b>Employment Status</b>		
Student	246	56.6
Employed	180	41.4
<b>Father's Education</b>		
(Low) Graduate of high school or below	243	55.9
Graduate of college or above (High)	191	43.9

### **3.3.1 Differences of Demographic Variables on Trait Anxiety**

Differences of response style, gender, employment status and father's education on the level of trait anxiety were investigated.

#### **3.3.1.1 The effect of Response Style on Trait Anxiety**

In order to examine the effect of response style on state anxiety, Independent Samples t-test was conducted. The analysis revealed that there was no significant

difference between administration of questionnaires by mail or by paper-pencil in terms of trait anxiety level,  $t(433) = 0.60$ , ns.

### **3.3.1.2 The effect of Gender on Trait Anxiety**

In order to examine if there was a significant difference on trait anxiety between male and female participants, t-test Independent Samples was conducted. It was revealed that gender did not have significant effect on anxiety level,  $t(433) = 0.20$ , ns.

### **3.3.1.3 The effect of Employment Status on Trait Anxiety**

In order to examine the effect of employment status on trait anxiety, Independent Samples t-test was conducted. It was indicated that anxiety level did not significantly differed between participants who were employed or student,  $t(424) = 0.82$ , ns.

### **3.3.1.4. The effect of Father's Education on Trait Anxiety**

In order to examine the effect of father's education on trait anxiety, Independent Samples t-test was conducted. It was revealed that there was no significant differences on anxiety level between participants having low educated father and those having high educated father,  $t(432) = 0.44$ , ns.

## **3.3.2 Differences of Demographic Variables on Depression**

Differences of response style, gender, employment status and father's education on depression level were investigated.

### **3.3.2.1 The effect of Response Style on Depression**

In order to examine the effect of response style on state anxiety, Independent Samples t-test was conducted. The analysis revealed that there was no significant

difference between administration of questionnaires by mail or by paper-pencil in terms of depression level,  $t(433) = 0.63$ , ns.

### **3.3.2.2 The effect of Gender on Depression**

In order to examine if there was significant difference on depressive symptoms between male and female participants, Independent Samples t-test was conducted. It was revealed that gender did not have significant effect on depression,  $t(433) = -0.24$ , ns.

### **3.3.2.3 The effect of Employment Status on Depression**

In order to examine the effect of employment status on depression, Independent Samples t-test was conducted. The findings indicated that depression level was not significantly differed between participants who were employed or student,  $t(424) = 1.40$ , ns.

### **3.3.2.4. The effect of Father's Education on Depression**

In order to examine the effect of father's education on depressive symptoms, Independent Samples t-test was conducted. Accordingly, there was no significant differences on depression between participants having low educated father and those having high educated father,  $t(432) = 2.24$ , ns.

## **3.3.3 Differences of Demographic Variables on Trait Worry**

Differences of response style, gender, employment status, and father's education on state worry level were examined.

### **3.3.3.1 The effect of Response Style on Trait Worry**

In order to investigate the influence of response style (by mail and by paper-pencil) on subscales of trait worry (i.e. Presence of Worry and Absence of Worry)

MANOVA was conducted. According to results, there was no significant main effect of Response Style [Multivariate  $F(2, 432) = 0.84$ , ns, Wilks' Lambda = 1.00,  $\eta^2 = .00$ ] on state worry. Since, the Multivariate  $F$  was not significant univariate analyses were not examined.

**Table 4. MANOVA for Trait Worry and Response Styles**

Source	Multivariate				Univariate		
	Wilks' Lambda	F	df	$\eta^2$	F	df	$\eta^2$
RESPONSE STYLE	1.00	0.84	2, 432	.00	-	-	-
Presence of worry	-	-	-	-	1.16	1, 433	.00
Absence of worry	-	-	-	-	0.01	1, 433	.00

### 3.3.3.2 The effect of Gender on Trait Worry

In order to investigate the influence of gender (Male and Female) on the subscales of trait worry (Presence of Worry and Absence of Worry) MANOVA was conducted. Results revealed a significant main effect for gender [Multivariate  $F(2, 432) = 18.83$ ,  $p < .001$ , Wilks' Lambda = 0.92,  $\eta^2 = .08$ ].

Following Multivariate analysis, univariate analyses were performed for Gender main effects with the Bonferroni correction. Thus, for the univariate analyses, the alpha values that were lower than .025 (division of alpha level by number of subscales, i.e.,  $.05/2 = .025$ ) were considered to be significant with this correction. Based on this correction, there was significant Gender main effect for

Presence of Worry,  $F(1, 433) = 26.38, p < .001, \eta^2 = .06$ . Accordingly, females ( $M = 29.05$ ) had higher scores on Presence of Worry compared to males ( $M = 24.50$ ). In addition, Gender had significant main effect for Absence of Worry,  $F(1, 433) = 32.61, p < .001, \eta^2 = .07$ , indicating that males ( $M = 14.89$ ) reported higher level of Absence of Worry than females ( $M = 12.64$ ).

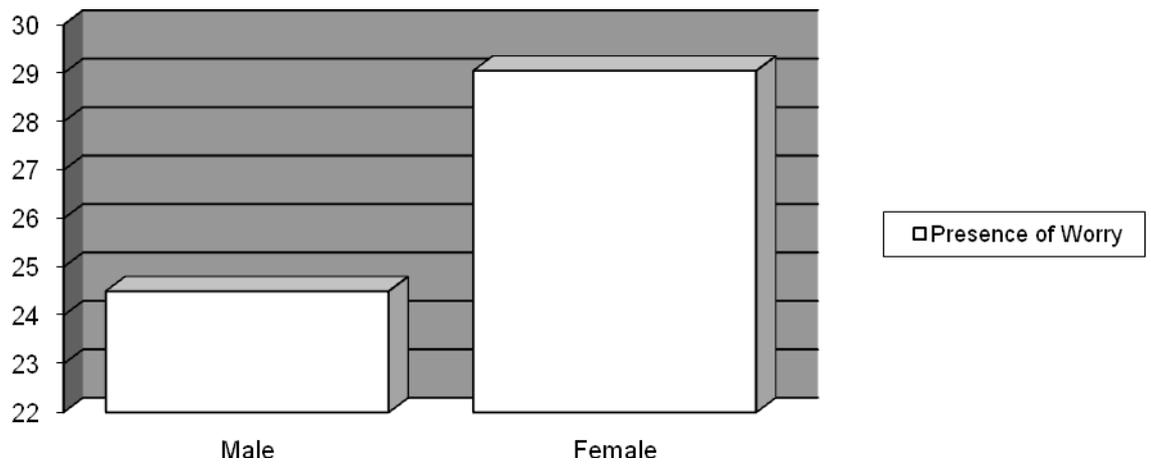
**Table 5. MANOVA for Trait Worry and Gender**

Source	Multivariate				Univariate			
	Lambda	Wilks'	F	df	$\eta^2$	F	df	$\eta^2$
GENDER	0.92		18.83*	2, 432	.08	-	-	-
Presence of Worry	-	-	-	-	-	26.38**	1, 433	.06
Absence of Worry	-	-	-	-	-	32.61**	1, 433	.07

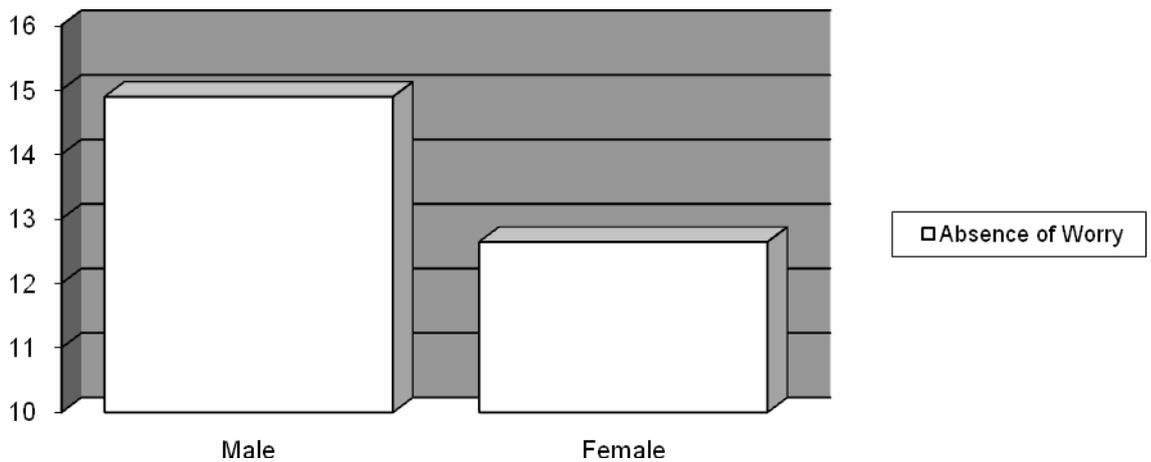
\*  $p < .001$ , \*\*  $p < .025$

**Table 6. Mean Scores of Gender on Trait Worry**

	Male	Female
Presence of Worry	24.50	29.05
Absence of Worry	14.89	12.64



**Figure 5. Mean Scores of Gender on Presence of Worry**



**Figure 6. Mean Scores of Gender on Absence of Worry**

### 3.3.3.3 The effect of Employment Status on Trait Worry

In order to investigate the influence of employment status (i.e. student and employed) on subscales of trait worry (Presence of Worry and Absence of Worry) MANOVA was conducted. According to results, there was no significant main effect

of Employment Status [Multivariate  $F(2, 423) = 2.52$ , ns, Wilks' Lambda = 0.99,  $\eta^2 = .01$ ] on trait worry. Since, the Multivariate  $F$  was not significant univariate analyses were not examined.

**Table 7. MANOVA for Trait Worry and Employment Status**

Source	Multivariate				Univariate		
	Wilks' Lambda	F	df	$\eta^2$	F	df	$\eta^2$
EMPLOYMENT STATUS	0.99	2.52	2, 423	.01	-	-	-
Presence of Worry	-	-	-	-	0.12	1, 424	.00
Absence of Worry	-	-	-	-	3.90	1, 424	.01

#### 3.3.3.4 The effect of Father's Education on Trait Worry

In order to examine the effect of father's education (low and high) on subscales of trait worry (i.e. Presence of Worry and Absence of Worry) MANOVA was performed. According to results, there was no significant main effect of Father's Education [Multivariate  $F(2, 431) = 1.61$ , ns, Wilks' Lambda = 0.99,  $\eta^2 = .01$ ] on trait worry. Since, the Multivariate  $F$  was not significant univariate analyses were not examined.

**Table 8. MANOVA for Trait Worry and Father's Education**

Source	Multivariate				Univariate		
	Wilks' Lambda	F	df	$\eta^2$	F	df	$\eta^2$
FATHER'S EDUCATION	0.99	1.61	2, 431	.01	-	-	-
Presence of Worry	-	-	-	-	1.58	1, 432	.00
Absence of Worry	-	-	-	-	3.17	1, 432	.01

**3.3.4 Differences of Demographic Variables on Social Anxiety**

Differences of response style, gender, employment status, and father's education on social anxiety were examined.

**3.3.4.1 The effect of Response Style on Social Anxiety**

In order to investigate the influence of response style (by mail and by paper-pencil) on subscales of social anxiety (i.e. Fear or Anxiety and Avoidance) MANOVA was conducted. According to results, there was no significant main effect of Response Style [Multivariate  $F(2, 432) = 0.24$ , ns, Wilks' Lambda = 1.00,  $\eta^2 = .00$ ]. Since, the Multivariate  $F$  was not significant univariate analyses were not examined.

**Table 9. MANOVA for Social Anxiety and Response Styles**

Source	Multivariate				Univariate		
	Wilks' Lambda	F	df	$\eta^2$	F	df	$\eta^2$
RESPONSE STYLE	1.00	0.24	2, 432	.00	-	-	-
Fear or Anxiety	-	-	-	-	0.20	1, 433	.00
Avoidance	-	-	-	-	0.00	1, 433	.00

**3.3.4.2 The effect of Gender on Social Anxiety**

In order to investigate the influence of Gender (i.e. Male and Female) on subscales of social anxiety (i.e. Fear or Anxiety and Avoidance) MANOVA was performed. It was determined no significant main effect for Gender [Multivariate  $F(2, 432) = 0.64, p < .001$ , Wilks' Lambda = 1.00,  $\eta^2 = .00$ ]. Since, the Multivariate  $F$  was not significant univariate analyses were not examined.

**Table 10. MANOVA for Social Anxiety and Gender**

Source	Multivariate				Univariate		
	Wilks' Lambda	F	df	$\eta^2$	F	df	$\eta^2$
GENDER	1.00	0.64	2, 432	.00	-	-	-
Fear or Anxiety	-	-	-	-	0.61	1, 433	.00
Avoidance	-	-	-	-	0.01	1, 433	.00

### 3.3.4.3 The effect of Employment Status on Social Anxiety

In order to investigate the effect of employment status (student and employed) on subscales of social anxiety (i.e. Fear or Anxiety and Avoidance) MANOVA was conducted. According to results, there was main effect of Employment Status [Multivariate  $F(2, 423) = 2.89, p \leq .05$ , Wilks' Lambda = 0.99,  $\eta^2 = .01$ ] on social anxiety.

After Multivariate analysis, univariate analyses were performed for this employment status significant main effect with the Bonferroni adjustment. Thus, for the univariate analyses, the alpha values that were lower than .025 (found by dividing alpha level by number of subscales, i.e.,  $.05/2 = .025$ ) were considered to be significant with this correction. Based on this correction, results indicated a significant Employment Status main effect for Fear or Anxiety,  $F(1, 424) = 5.21, p < .03, \eta^2 = .01$ . Accordingly, students ( $M = 40.43$ ) reported higher level of Fear or Anxiety compared to employed participants ( $M = 38.09$ ). Furthermore, there was revealed significant main effect of Employment Status on Avoidance,  $F(1, 424) = 5.04, p < .03, \eta^2 = .01$ , indicating that students ( $M = 42.69$ ) had higher level of Avoidance than employed participants ( $M = 40.38$ ).

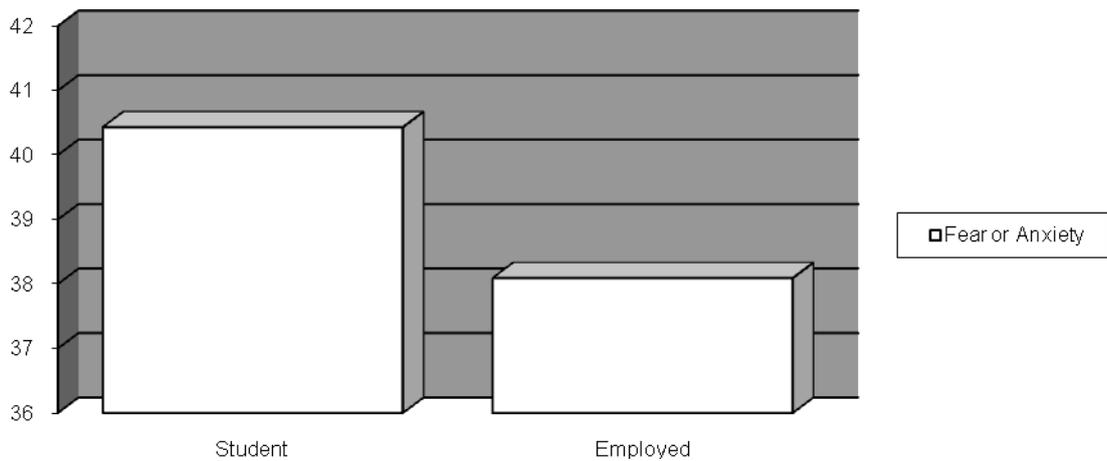
**Table 11. MANOVA for Social Anxiety and Employment Status**

Source	Multivariate				Univariate		
	Wilks' Lambda	F	df	$\eta^2$	F	df	$\eta^2$
EMPLOYMENT STATUS	0.99	2.89*	2, 423	.01	-	-	-
Fear or Anxiety	-	-	-	-	5.21**	1, 424	.01
Avoidance	-	-	-	-	5.04**	1, 424	.01

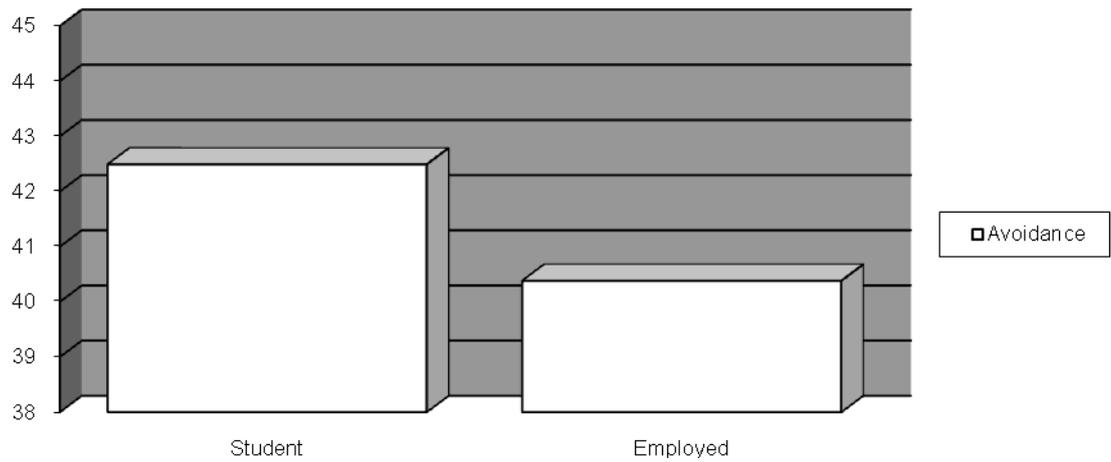
\* $p \leq .05$ , \*\*  $p < .03$

**Table 12. Mean Social Anxiety Scores of Participants with Different Employment Status**

	Student	Employed
Fear or Anxiety	40.43	38.09
Avoidance	42.69	40.38



**Figure 7. Mean Scores of Employment Status on Fear or Anxiety**



**Figure 8. Mean Scores of Employment Status on Avoidance**

#### **3.3.4.4 The effect of Father’s Education on Social Anxiety**

In order to examine the influence of father’s education (low and high) on subscales of social anxiety (i.e. Fear or Anxiety and Avoidance) MANOVA was performed. According to the results, there was no significant main effect of Father’s Education [Multivariate  $F(2, 431) = 0.15$ , ns, Wilks’ Lambda = 1.00,  $\eta^2 = .00$ ] on social anxiety. Since, the Multivariate  $F$  was not significant univariate analyses were not examined.

**Table 13. MANOVA for Social Anxiety and Father's Education**

Source	Multivariate				Univariate		
	Wilks' Lambda	F	df	$\eta^2$	F	df	$\eta^2$
FATHER'S EDUCATION	1.00	0.15	2, 431	.00	-	-	-
Fear or Anxiety	-	-	-	-	0.00	1, 432	.00
Avoidance	-	-	-	-	0.12	1, 432	.00

### 3.3.5 Differences of Demographic Variables on Metacognitions

Differences of response style, gender, employment status, and father's education on metacognitions were examined.

#### 3.3.5.1 The effect of Response Style on Metacognitions

In order to investigate the influence of response style (by mail and by paper-pencil) on 5 subscales of metacognition, namely, 1) positive beliefs about worry, 2) negative beliefs concerning uncontrollability of thoughts and danger, 3) lack of cognitive confidence, 4) beliefs about need to control thoughts, and 5) cognitive self-consciousness, MANOVA was conducted. According to the results, there was no significant main effect of Response Style [Multivariate  $F(5, 429) = 2.01$ , ns, Wilks' Lambda = 0.98,  $\eta^2 = .02$ ]. Since, the Multivariate  $F$  was not significant univariate analyses were not examined.

**Table 14. MANOVA for Metacognitions and Response Styles**

Source	Multivariate				Univariate			
	Lambda	Wilks'	F	df	$\eta^2$	F	df	$\eta^2$
RESPONSE STYLE	0.98		2.01	5, 429	.02	-	-	-
MCQ-1	-	-	-	-	-	0.84	1, 433	.00
MCQ-2	-	-	-	-	-	1.39	1, 433	.00
MCQ-3	-	-	-	-	-	2.54	1, 433	.01
MCQ-4	-	-	-	-	-	0.14	1, 433	.00
MCQ-5	-	-	-	-	-	2.97	1, 433	.01

Note: MCQ-1 = positive beliefs about worry, MCQ-2 = negative beliefs concerning uncontrollability of thoughts and danger, MCQ-3 = lack of cognitive confidence, MCQ-4 = beliefs about need to control thoughts, MCQ-5 = cognitive self-consciousness

### 3.3.5.2 The effect of Gender on Metacognitions

In order to investigate the influence of Gender (Male and Female) on subscales of metacognition [i.e. 1) positive beliefs about worry, 2) negative beliefs concerning uncontrollability of thoughts and danger, 3) lack of cognitive confidence, 4) beliefs about need to control thoughts, and 5) cognitive self-consciousness] MANOVA was conducted. Results revealed a significant main effect for gender [Multivariate  $F(5, 429) = 4.40, p \leq .001$ , Wilks' Lambda = 0.95,  $\eta^2 = .05$ ].

After Multivariate analysis, univariate analyses were performed for significant Gender main effect, with the Bonferroni adjustment. Thus, for the univariate analyses, the alpha values that were lower than .01 (found by dividing

alpha level by number of subscales, i.e.,  $.05/5 = .01$ ) were considered to be significant with this correction. Based on this correction, results indicated Gender main effect for Negative Beliefs about Uncontrollability of Thoughts and Danger,  $F(1, 433) = 8.81, p < .01, \eta^2 = .02$ . Accordingly, females ( $M = 11.76$ ) reported more Negative Beliefs about Uncontrollability of Thoughts and Danger compared to males ( $M = 10.64$ ). In addition, there was a significant main effect of Gender on Cognitive Self-Consciousness,  $F(1, 433) = 7.21, p < .01, \eta^2 = .02$ , indicating that males ( $M = 16.87$ ) had higher level of Cognitive Self-Consciousness than females ( $M = 15.92$ ).

**Table 15. MANOVA for Metacognitions and Gender**

Source	Multivariate				Univariate		
	Wilks' Lambda	F	df	$\eta^2$	F	df	$\eta^2$
GENDER	0.95	4.40*	5, 429	.05	-	-	-
MCQ-1	-	-	-	-	1.21	1, 433	.00
MCQ-2	-	-	-	-	8.81**	1, 433	.02
MCQ-3	-	-	-	-	0.36	1, 433	.00
MCQ-4	-	-	-	-	0.84	1, 433	.00
MCQ-5	-	-	-	-	7.21**	1, 433	.02

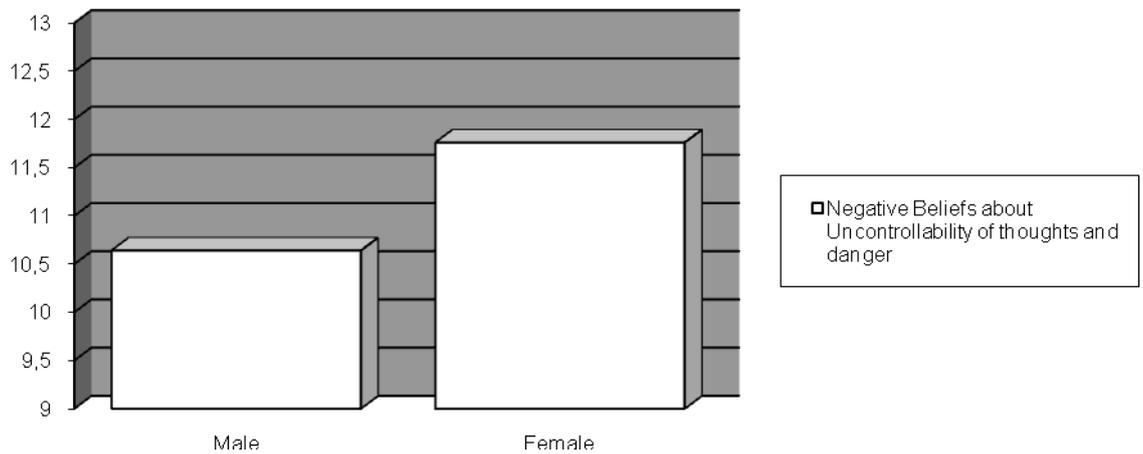
Note: MCQ-1 = positive beliefs about worry, MCQ-2 = negative beliefs concerning uncontrollability of thoughts and danger, MCQ-3 = lack of cognitive confidence, MCQ-4 = beliefs about need to control thoughts, MCQ-5 = cognitive self-consciousness

\* $p < .001$ , \*\*  $p < .01$

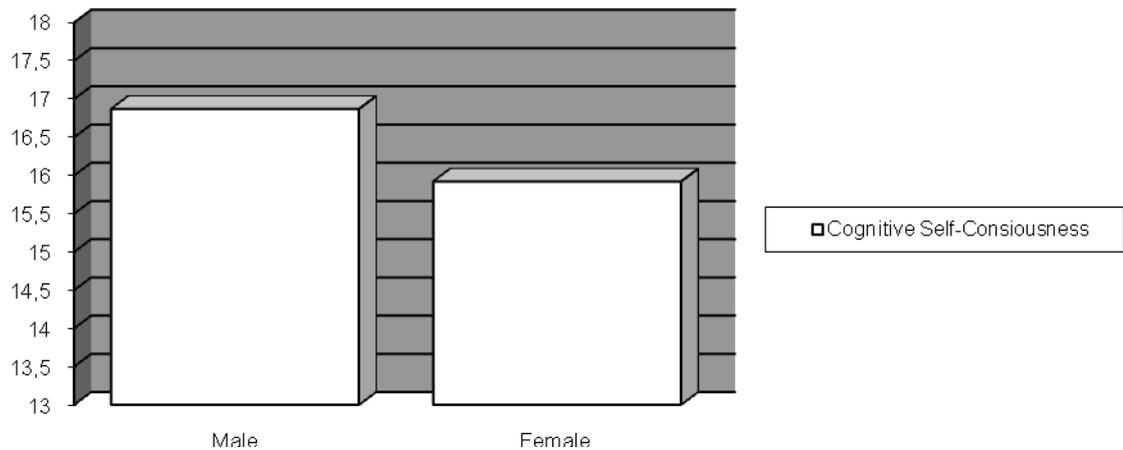
**Table 16. Mean Scores of Gender on Metacognitions**

	Male	Female
MCQ-2	10.64	11.76
MCQ-5	16.87	15.92

Note: MCQ-2 = negative beliefs concerning uncontrollability of thoughts and danger, MCQ-5 = cognitive self-consciousness.



**Figure 9. Mean Scores of Gender on Negative Beliefs Concerning Uncontrollability of thoughts and danger**



**Figure 10. Mean Scores of Gender on Cognitive- Self-Consciousness**

### **3.3.5.3 The effect of Employment Status on Metacognitions**

In order to investigate the influence of employment status (student and employed) on subscales of metacognition [i.e. 1) positive beliefs about worry, 2) negative beliefs concerning uncontrollability of thoughts and danger, 3) lack of cognitive confidence, 4) beliefs about need to control thoughts, and 5) cognitive self-consciousness] MANOVA was performed. According to results, there was no significant main effect of Employment Status [Multivariate  $F(5, 420) = 1.60$ , ns, Wilks' Lambda = 0.98,  $\eta^2 = .02$ ] on Metacognitions. Since, the Multivariate  $F$  was not significant univariate analyses were not examined.

**Table 17. MANOVA for Metacognitions and Employment Status**

Source	Multivariate					Univariate		
	Wilks' Lambda	F	df	$\eta^2$	F	df	$\eta^2$	
EMPLOYMENT STATUS	0.98	1.60	5, 420	.02	-	-	-	
MCQ-1	-	-	-	-	7.92	1, 424	.02	
MCQ-2	-	-	-	-	0.44	1, 424	.00	
MCQ-3	-	-	-	-	0.00	1, 424	.00	
MCQ-4	-	-	-	-	0.26	1, 424	.00	
MCQ-5	-	-	-	-	0.66	1, 424	.00	

Note: MCQ-1 = positive beliefs about worry, MCQ-2 = negative beliefs concerning uncontrollability of thoughts and danger, MCQ-3 = lack of cognitive confidence, MCQ-4 = beliefs about need to control thoughts, MCQ-5 = cognitive self-consciousness

### 3.3.5.4 The effect of Father's Education on Metacognitions

In order to examine the influence of father's education (low and high) on subscales of metacognition [i.e. 1) positive beliefs about worry, 2) negative beliefs concerning uncontrollability of thoughts and danger, 3) lack of cognitive confidence, 4) beliefs about need to control thoughts, and 5) cognitive self-consciousness], MANOVA was performed. According to the results, there was no significant main effect of Father's Education [Multivariate  $F(5, 428) = 1.90$ , ns, Wilks' Lambda = 0.98,  $\eta^2 = .02$ ] on Metacognition. Since, the Multivariate  $F$  was not significant univariate analyses were not examined.

**Table 18. MANOVA for Metacognitions and Father's Education**

Source	Multivariate					Univariate		
	Wilks' Lambda	F	df	$\eta^2$	F	df	$\eta^2$	
FATHER'S EDUCATION	0.98	1.90	5, 428	.02	-	-	-	
MCQ-1	-	-	-	-	2.31	1, 432	.00	
MCQ-2	-	-	-	-	0.45	1, 432	.00	
MCQ-3	-	-	-	-	0.27	1, 432	.01	
MCQ-4	-	-	-	-	3.65	1, 432	.01	
MCQ-5	-	-	-	-	0.15	1, 432	.00	

Note. MCQ-1 = positive beliefs about worry, MCQ-2 = negative beliefs concerning uncontrollability of thoughts and danger, MCQ-3 = lack of cognitive confidence, MCQ-4 = beliefs about need to control thoughts, MCQ-5 = cognitive self-consciousness

### 3.3.6 Differences of Demographic Variables on Coping Strategies

Differences of response style, gender, employment status, and father's education on coping strategies were examined.

#### 3.3.6.1 The effect of Response Style on Coping Strategies

In order to investigate the influence of response style (by mail and by paper-pencil) on subscales of coping strategies (i.e. Problem-Focused Coping, Emotion-Focused Coping and Indirect Coping) MANOVA was conducted. According to the results, there was no significant main effect of Response Style [Multivariate  $F(3, 431) = 1.38$ , ns, Wilks' Lambda = 0.99,  $\eta^2 = .01$ ] on coping strategies. Since, the Multivariate  $F$  was not significant univariate analyses were not examined.

**Table 19. MANOVA for Coping Skills and Response Style**

Source	Multivariate				Univariate		
	Wilks' Lambda	F	df	$\eta^2$	F	df	$\eta^2$
RESPONSE STYLE	0.99	1.38	3, 431	.01	-	-	-
Problem-Focused	-	-	-	-	0.08	1, 433	.00
Emotion-Focused	-	-	-	-	4.15	1, 433	.01
Indirect	-	-	-	-	0.03	1, 433	.00

### 3.3.6.2 The effect of Gender on Coping Strategies

In order to examine the influence of Gender (Male and Female) on different coping strategies (i.e. Problem-Focused Coping, Emotion-Focused Coping and Indirect Coping) MANOVA was performed. Results revealed a significant main effect for gender [Multivariate  $F(3, 431) = 8.48, p < .001$ , Wilks' Lambda = 0.94,  $\eta^2 = .06$ ].

Following Multivariate analysis, univariate analyses were performed for significant effects with the Bonferroni correction. Thus, for the univariate analyses, the alpha values that were lower than .02 (found by dividing alpha level by number of subscales, i.e.,  $.05/3 = .02$ ) were considered to be significant with this correction. Based on this correction, results indicated Gender main effect for Problem-Focused Coping,  $F(1, 433) = 6.92, p < .02, \eta^2 = .02$ . Accordingly, males ( $M = 103.71$ ) engaged in more Problem-Focused Coping strategies compared to females ( $M = 100.23$ ). In addition, there was a significant main effect of Gender on Indirect

Coping,  $F(1, 433) = 16.30, p < .001, \eta^2 = .04$ , indicating that females ( $M = 40.54$ ) reported more Indirect Coping strategies than males ( $M = 37.70$ ).

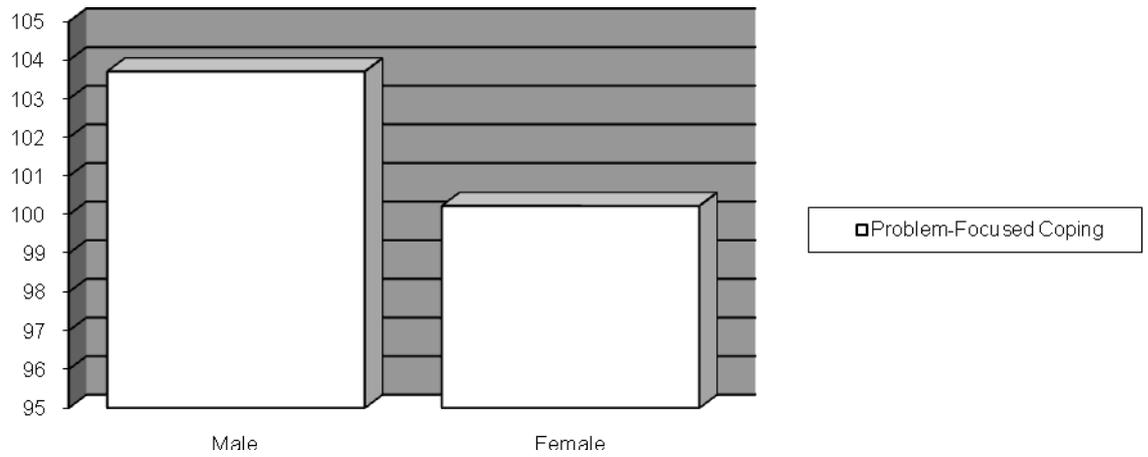
**Table 20. MANOVA for Coping Skills and Gender**

Source	Multivariate				Univariate		
	Wilks' Lambda	F	df	$\eta^2$	F	df	$\eta^2$
GENDER	0.94	8.48*	3, 431	.06	-	-	-
Problem-Focused	-	-	-	-	6.92**	1, 433	.02
Emotion-Focused	-	-	-	-	0.61	1, 433	.00
Indirect	-	-	-	-	16.30**	1, 433	.04

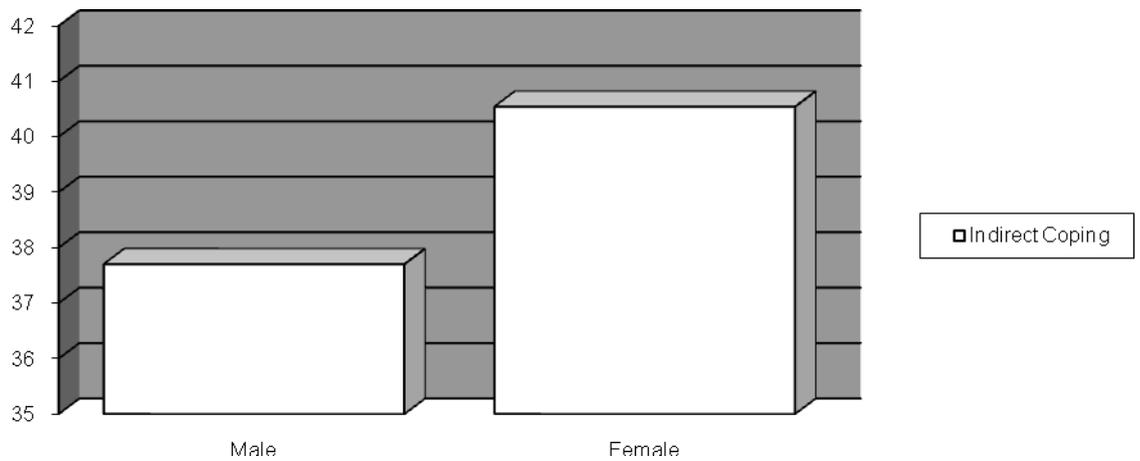
\* $p < .001$ , \*\*  $p < .02$

**Table 21. Mean Scores of Gender on Coping Skills**

	Male	Female
Problem-Focused	103.71	100.23
Indirect	37.70	40.54



**Figure 11. Mean Scores of Gender on Problem-Focused Coping**



**Figure 12. Mean Scores of Gender on Indirect Coping**

### 3.3.6.3 The effect of Employment Status on Coping Strategies

In order to investigate the influence of employment status (student and employed) on different coping strategies (i.e. Problem-Focused Coping, Emotion-

Focused Coping, and Indirect Coping) MANOVA was performed. According to results, there was no significant main effect of Employment Status [Multivariate  $F(3, 422) = 1.05$ , ns, Wilks' Lambda = 0.99,  $\eta^2 = .01$ ] on Ways of Coping. Since, the Multivariate  $F$  was not significant univariate analyses were not examined.

**Table 22. MANOVA for Coping Skills and Employment Status**

Source	Multivariate					Univariate		
	Wilks' Lambda	F	df	$\eta^2$	F	df	$\eta^2$	
EMPLOYMENT STATUS	0.99	1.05	3, 422	.01	-	-	-	
Problem-Focused	-	-	-	-	1.48	1, 424	.00	
Emotion-Focused	-	-	-	-	1.13	1, 424	.00	
Indirect	-	-	-	-	0.51	1, 424	.00	

#### 3.3.6.4 The effect of Father's Education on Coping Strategies

In order to examine the influence of father's education on different coping strategies (i.e. Problem-Focused Coping, Emotion-Focused Coping and Indirect Coping) (low and high MANOVA was conducted. Results revealed a significant main effect for father's education [Multivariate  $F(3, 430) = 4.46$ ,  $p < .01$ , Wilks' Lambda = 0.97,  $\eta^2 = .03$ ].

Following Multivariate analysis, univariate analyses were performed for the significant main effects with the Bonferroni correction. Thus, for the univariate analyses, the alpha values that were lower than .02 (found by dividing alpha level by

number of subscales, i.e.,  $.05/3 = .02$ ) were considered to be significant with this correction. Based on this correction, results indicated Father's Education main effect only for Emotion-Focused Coping,  $F(1, 432) = 7.92, p < .02, \eta^2 = .02$ . Accordingly, participants having low educated father ( $M = 54.05$ ) engaged in more Emotion-Focused Coping than having high educated father ( $M = 51.34$ ).

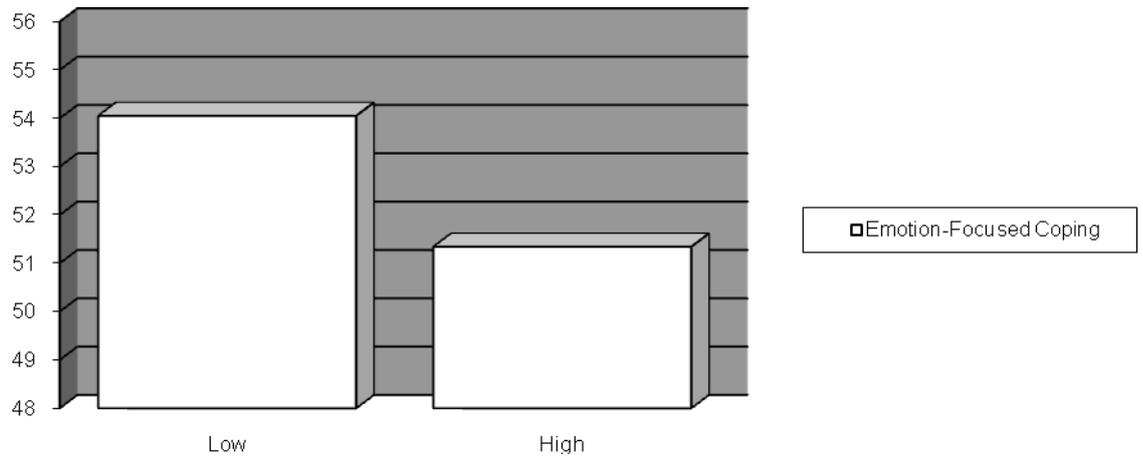
**Table 23. MANOVA for Coping Skills and Father's Education**

Source	Multivariate					Univariate		
	Lambda	Wilks'	F	df	$\eta^2$	F	df	$\eta^2$
FATHER'S EDUCATION	0.97		4.46*	3, 430	.03	-	-	-
Problem-Focused	-		-	-	-	0.00	1, 432	.00
Emotion-Focused	-		-	-	-	7.92**	1, 432	.02
Indirect	-		-	-	-	3.71	1, 432	.01

\*  $p < .01$ , \*\*  $p < .02$

**Table 24. Mean Coping Skills Scores of Participants Having Father with Different Education Level**

	Low	High
Emotion-Focused	54.05	51.34



**Figure 13. Mean Scores of Participants Having Father with Different Education Level On Emotion-Focused Coping**

### 3.4 Correlation Coefficients between Groups of Variables

In order to examine the relationship between subscales of Metacognition Questionnaire [i.e., Positive Beliefs about Worry (MCQ-1), Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2), Lack of Cognitive Confidence (MCQ-3), Beliefs about Need to Control Thoughts (MCQ-4) and Cognitive Self-Consciousness (MCQ-5)], subscales of Penn State Worry Questionnaire (i.e., Presence of Worry and Absence of Worry), subscales of Liebowitz Social Anxiety Scale (i.e., Fear or Anxiety and Avoidance), and subscales of Coping Inventory (i.e., Problem-Focused Coping, Emotion-Focused Coping and Indirect Coping), and anxiety and depression, Pearson correlation analyses were carried out.

Considering the large sample size, among the significant correlations only those having a correlation coefficient of larger than .20 were interpreted. According to the results as shown in Table 25, Positive Beliefs about Worry revealed significant

positive correlations with state anxiety ( $r = .25, p < .001$ ), presence or worry ( $r = .41, p < .001$ ), social anxiety ( $r = .22, p < .001$ ); and negative significant correlation with absence of worry ( $r = -.37, p < .001$ ). However, there was not significant or interpretive correlation between this group and any coping ways.

For second group of Metacognition; namely, Negative Beliefs Concerning Uncontrollability of Thoughts and Danger indicated significant positive correlations with trait anxiety ( $r = .55, p < .001$ ), depression ( $r = .39, p < .001$ ), presence of worry ( $r = .69, p < .001$ ), social anxiety ( $r = .27, p < .001$ ) and avoidance ( $r = .27, p < .001$ ); and significant negative correlation with absence of worry ( $r = -.41, p < .001$ ). Furthermore, results revealed a significant negative correlation between this group of metacognition and problem-focused coping ( $r = -.39, p < .001$ ).

The third group of Metacognition, namely Lack of Cognitive Confidence, the analyses did not reveal significant or interpretive correlation with any kind of anxiety or worry. Moreover, none of the coping ways was found to be significant or interpreted with this group of metacognition.

According analyses of Beliefs about Need to Control Thoughts, there was only significant positive correlation with depression ( $r = .21, p < .001$ ). Moreover, for this group, results indicated a significant and positive correlation only with emotion-focused coping ( $r = .26, p < .001$ ).

For the fifth group of Metacognition, namely, Cognitive Self-Consciousness, there were not significant correlations with any kind of anxiety, worry or depression. However, this group was found to be positively correlated with problem focused coping ( $r = .37, p < .001$ )

**Table 25. Pearson Correlations between Metacognition Measures, Anxiety, Depression, Subscales of Penn State Worry Questionnaire, Subscales of Liebowitz Social Anxiety Scale and subscales of Coping Inventory**

	STAI-T	BDI	PSWQ-1	PSWQ-2	LSAS-1	LSAS-2	MCQ-2	MCQ-3	MCQ-1	MCQ-5	MCQ-4	TWCI-1	TWCI-2	TWCI-3
STAI-T	1	.52**	.68**	-.47**	.35**	.37**	.55**	.16**	.25**	-.05	.14**	-.60**	.04	.10*
BDI		1	.40**	-.24**	.23**	.25**	.39**	.09	.15**	.02	.21**	-.42**	.06	-.06
PSWQ-1			1	-.60**	.34**	.31**	.69**	.11*	.41**	.06	.18**	-.39**	.11*	.14**
PSWQ-2				1	-.18**	-.17**	-.41**	-.01	-.37**	.07	-.02	.37**	.05	-.11*
LSAS-1					1	.77**	.27**	.13**	.22**	-.06	.08	-.36**	.12*	.02
LSAS-2						1	.27**	.11*	.19**	-.04	.14**	-.33**	.14**	-.05
MCQ-2							1	.16**	.24**	.06	.28**	-.39**	.08	.10*
MCQ-3								1	.02	-.15**	-.02	-.19**	.01	.08
MCQ-1									1	.21**	.30**	-.06	.13**	.09
MCQ-5										1	.43**	.37**	.01	-.07
MCQ-4											1	.08	.26**	.00
TWCI-1												1	.08	.02
TWCI-2													1	.12*
TWCI-3														1

Note 1. \*  $p < .05$ , \*\*  $p < .001$ , Note 2. STAI-T = State-Trait Inventory-Trait Form, BDI = Beck Depression Inventory, PSWQ-1=Presence of Worry, PSWQ-2= Absence of Worry, LSAS-1 = Social Fear or Anxiety, LSAS-2 = Social Avoidance, MCQ1 = positive beliefs about worry, MCQ2 = negative beliefs about uncontrollability of thoughts and danger, MCQ3 = lack of cognitive confidence, MCQ4 = beliefs about need to control thoughts, MCQ5 = cognitive self-consciousness, TWCI-1 = Problem-Focused Coping, TWCI-2 = Emotion-Focused Coping, TWCI-3 = Indirect Coping

### **3.5 Associated Factors of Psychological Well-Being**

In order to examine the associated factors of different sources of anxiety and depression, 6 separate regression analyses were carried out. For this regression analyses the dependent variables were Trait Anxiety, Depression, Presence of Worry, Absence of Worry, Social Anxiety and Social Avoidance, respectively. Independent variables entered into the equation via two steps. For all analyses, in the first step, 5 types of metacognition, namely; Positive Beliefs about Worry (MCQ-1), Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2), Lack of Cognitive Confidence (MCQ-3), Beliefs about Need to Control Thoughts (MCQ-4) and Cognitive Self-Consciousness (MCQ-5), were entered via stepwise method, in order to control possible effects of metacognitions. After controlling metacognitions that were significantly associated with dependent variable, in the second step, 3 different types of coping (i.e. Problem-Focused, Emotion-Focused and Indirect Coping) were again entered to the regression analyses via stepwise method.

#### **3.5.1 Associated factors of Trait Anxiety**

The first regression analyses examined the associated factors of Trait Anxiety. Among the metacognition categories, initially Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2) entered into the regression equation ( $\beta = .55$ ,  $t(433) = 13.78$ ,  $p < .001$ ,  $pr = .55$ ) and explained 31% of the variance by itself,  $F_{\text{change}}(1,433) = 189.84$ ,  $p < .001$ . As the second step, Positive Beliefs about Worry (MCQ-1) entered into the equation ( $\beta = .12$ ,  $t(432) = 3.02$ ,  $p <$

.01,  $p = .14$ ) and explained variance increased to 32%,  $F_{\text{change}}(1,432) = 9.10$ ,  $p < .01$ . Among the suggested types of metacognition, lastly, the lack of Cognitive Self-Consciousness (MCQ-5) significantly associated with Trait Anxiety ( $\beta = -.11$ ,  $t(431) = -2.81$ ,  $p < .01$ ,  $pr = -.13$ ) and explained the variance increased slightly to 33%,  $F_{\text{change}}(1,431) = 7.87$ ,  $p < .01$ . After controlling for these types of metacognition, which explained 33% of variance, among the coping styles, the lack of Problem-Focused Coping was significantly associated with the Trait Anxiety ( $\beta = -.50$ ,  $t(430) = -12.12$ ,  $p < .001$ ,  $pr = -.51$ ) and the explained the variance increased to 50%,  $F_{\text{change}}(1,430) = 146.94$ ,  $p < .001$ . Finally, Indirect Coping entered into the equation ( $\beta = .07$ ,  $t(429) = 2.09$ ,  $p < .05$ ,  $pr = .10$ ) and explained the variance increased slightly to 51% at this final step,  $F_{\text{change}}(1,429) = 4.36$ ,  $p < .05$ .

**Table 26. Associates of Trait Anxiety**

	<i>F</i> change	df	$\beta$	<i>t</i> (within set)	<i>pr</i>	R <sup>2</sup>
1) MCQ-2	189.84 <sup>***</sup>	1,433	.55	13.78 <sup>***</sup>	.55	.31
2) MCQ-1	9.10 <sup>**</sup>	1,432	.12	3.02 <sup>**</sup>	.14	.32
3) MCQ-5	7.87 <sup>**</sup>	1,431	.11	-2.81 <sup>**</sup>	-.13	.33
4) Problem-Focused Coping	146.94 <sup>***</sup>	1,430	.50	-12.12 <sup>***</sup>	-.51	.50
5) Indirect Coping	4.36 <sup>*</sup>	1,429	.07	2.09 <sup>*</sup>	.10	.51

Note \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ; MCQ-1 = positive beliefs about worry, MCQ-2 = negative beliefs concerning uncontrollability of thoughts and danger, MCQ-5 = cognitive self-consciousness.

### 3.5.2 Associated Factors of Depression

The second regression analyses examined the associated factors of Depression. Among the metacognition categories, initially Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2) entered into the regression equation ( $\beta = .39$ ,  $t(433) = 8.69$ ,  $p < .001$ ,  $pr = .39$ ) and explained 15% of the variance by itself,  $F_{\text{change}}(1,433) = 75.56$ ,  $p < .001$ . As the second step, Beliefs about Need to Control Thoughts (MCQ-4) entered into the equation ( $\beta = .11$ ,  $t(432) = 2.28$ ,  $p < .05$ ,  $pr = .11$ ) and explained variance increased slightly to 16%,  $F_{\text{change}}(1,432) = 5.18$ ,  $p < .05$ . After controlling for these types of metacognition, which explained 16% of variance, among the coping styles, the lack of Problem-Focused Coping was significantly associated with the Depression ( $\beta = -.36$ ,  $t(431) = -7.72$ ,  $p < .001$ ,  $pr = -.35$ ) and the explained the variance increased to 26% at this final step,  $F_{\text{change}}(1,431) = 59.53$ ,  $p < .001$ .

**Table 27. Associates of Depression**

	<i>F</i> change	df	$\beta$	<i>t</i> (within set)	<i>pr</i>	<i>R</i> <sup>2</sup>
1) MCQ-2	75.56***	1,433	.39	8.69***	.39	.15
2) MCQ-4	5.18*	1,432	.11	2.28*	.11	.16
3) Problem-Focused Coping	59.53***	1,431	-.36	-7.72***	-.35	.26

Note \*  $p < .05$ , \*\*\*  $p < .001$ ; MCQ-2 = negative beliefs about uncontrollability of thoughts and danger, MCQ-4 = beliefs about need to control thoughts.

### 3.5.3 Associated Factors of Trait Worry

#### 3.5.3.1 Associated Factors of Presence of Worry

The third regression analyses examined the associated factors of Presence of Worry. Among the metacognition categories, as the first step, Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2) entered into the regression equation ( $\beta = .69$ ,  $t(433) = 19.77$ ,  $p < .001$ ,  $pr = .69$ ) and explained 47% of the variance by itself,  $F_{\text{change}}(1,433) = 390.85$ ,  $p < .001$ . As the second step, Positive Beliefs about Worry (MCQ-1), entered into the equation ( $\beta = .26$ ,  $t(432) = 7.79$ ,  $p < .001$ ,  $pr = .35$ ) and explained variance increased to 54%,  $F_{\text{change}}(1,432) = 60.67$ ,  $p < .001$ . Among the suggested types of metacognition, lastly, Beliefs about Need to Control Thoughts (MCQ-4) significantly associated with Presence of Worry ( $\beta = -.09$ ,  $t(431) = -2.46$ ,  $p < .05$ ,  $pr = -.12$ ) and explained the variance increased slightly to 55%,  $F_{\text{change}}(1,431) = 6.05$ ,  $p < .05$ . After controlling for these types of metacognition, which explained 55% of variance, among the coping styles, the lack of Problem-Focused Coping was significantly associated with the Presence of Worry ( $\beta = -.14$ ,  $t(430) = -3.91$ ,  $p < .001$ ,  $pr = -.19$ ) and the explained the variance increased to 56%,  $F_{\text{change}}(1,430) = 15.28$ ,  $p < .001$ . Finally, Indirect Coping entered into the equation ( $\beta = .07$ ,  $t(429) = 2.03$ ,  $p < .05$ ,  $pr = .10$ ) and explained the variance increased slightly to 57% at this final step,  $F_{\text{change}}(1,429) = 4.13$ ,  $p < .05$ .

**Table 28. Associates of Presence of Worry**

	<i>F</i> change	df	$\beta$	<i>t</i> (within set)	<i>pr</i>	<i>R</i> <sup>2</sup>
1) MCQ-2	390.85***	1,433	.69	19.77***	.69	.47
2) MCQ-1	60.67***	1,432	.26	7.79***	.35	.54
3) MCQ-4	6.05*	1,431	-.09	-2.46*	-.12	.55
4) Problem-Focused Coping	15.28***	1,430	-.14	-3.91***	-.19	.56
5) Indirect Coping	4.13*	1,429	.07	2.03*	.10	.57

Note \*  $p < .05$ , \*\*\*  $p < .001$ ; MCQ-1 = positive beliefs about worry, MCQ-2 = negative beliefs concerning uncontrollability of thoughts and danger, MCQ-4 = beliefs about need to control thoughts.

### 3.5.3.2 Associated Factors of Absence of Worry

The fourth regression analyses examined the associated factors of Absence of Worry. Among the metacognition categories, as the first step, the lack of Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2) was significantly associated with the Absence of Worry ( $\beta = -.41$ ,  $t(433) = -9.42$ ,  $p < .001$ ,  $pr = -.41$ ) and explained 17% of the variance by itself,  $F_{\text{change}}(1,433) = 88.67$ ,  $p < .001$ . As the second step, the lack of Positive Beliefs about Worry (MCQ-1) was significantly associated with the Absence of Worry ( $\beta = -.29$ ,  $t(432) = -6.84$ ,  $p < .001$ ,  $pr = -.31$ ) and explained variance increased to 25%,  $F_{\text{change}}(1,432) = 46.72$ ,  $p < .001$ . As the third step, Beliefs about Need to Control Thoughts (MCQ-4) entered into the regression equation ( $\beta = .19$ ,  $t(431) = 4.42$ ,  $p < .001$ ,  $pr = .21$ ) and explained the variance increased to 28%,  $F_{\text{change}}(1,431) = 19.57$ ,  $p < .001$ . Among the

suggested types of metacognition, lastly, Cognitive Self-Consciousness (MCQ-5) entered into the regression equation ( $\beta = .10$ ,  $t(430) = 2.25$ ,  $p < .05$ ,  $pr = .11$ ) and explained the variance increased slightly to 29%,  $F_{\text{change}}(1,430) = 5.08$ ,  $p < .05$ . After controlling for these types of metacognition, which explained 29% of variance, among the coping styles, Problem-Focused Coping was significantly associated with the Absence of Worry ( $\beta = .22$ ,  $t(429) = 4.56$ ,  $p < .001$ ,  $pr = .22$ ) and the explained the variance increased to 33% at this final step,  $F_{\text{change}}(1,429) = 20.79$ ,  $p < .001$ .

**Table 29. Associates of Absence of Worry**

	<i>F</i> change	df	$\beta$	<i>t</i> (within set)	<i>pr</i>	$R^2$
1) MCQ-2	88.67***	1,433	-.41	-9.42***	-.41	.17
2) MCQ-1	46.72***	1,432	-.29	-6.84***	-.31	.25
3) MCQ-4	19.57***	1,431	.19	4.42***	.21	.28
4) MCQ-5	5.08*	1,430	.10	2.25*	.11	.29
5) Problem-Focused Coping	20.79***	1,429	.22	4.56***	.22	.33

Note \*  $p < .05$ , \*\*\*  $p < .001$ ; MCQ-1 = positive beliefs about worry, MCQ-2 = negative beliefs concerning uncontrollability of thoughts and danger, MCQ-4 = beliefs about need to control thoughts, MCQ-5 = cognitive self-consciousness.

### 3.5.4 Associated Factors of Social Anxiety

#### 3.5.4.1 Associated Factors of Social Fear/Anxiety

The fifth regression analyses examined the associated factors of Social Fear/Anxiety. Among the metacognition categories, as the first step, Negative Beliefs

Concerning Uncontrollability of Thoughts and Danger (MCQ-2) entered into the regression equation ( $\beta = .27, t(433) = 5.86, p < .001, pr = .27$ ) and explained 7% of the variance by itself,  $F_{\text{change}}(1,433) = 34.28, p < .001$ . As the second step, Positive Beliefs about Worry (MCQ-1), entered into the equation ( $\beta = .16, t(432) = 3.40, p < .001, pr = .16$ ) and explained variance increased to 10%,  $F_{\text{change}}(1,432) = 11.58, p < .001$ . Among the suggested types of metacognition, lastly, the lack of Cognitive Self-Consciousness (MCQ-5) was significantly associated with the Social Anxiety ( $\beta = -.12, t(431) = -2.52, p < .05, pr = -.12$ ) and the explained the variance increased to 11%. After controlling for these types of metacognition, which explained 11% of variance, among the coping styles, the lack of Problem-Focused Coping was significantly associated with the Social Anxiety ( $\beta = -.31, t(430) = -5.83, p < .001, pr = -.27$ ) and the explained the variance increased to 18%,  $F_{\text{change}}(1,430) = 33.93, p < .001$ . Finally Emotion-Focused Coping was entered into equation ( $\beta = .12, t(429) = 2.62, p < .01, pr = .13$ ) and the explained the variance increased to slightly 19% at this final step,  $F_{\text{change}}(1,429) = 6.85, p < .01$ .

**Table 30. Associates of Social Anxiety**

	<i>F</i> change	df	$\beta$	<i>t</i> (within set)	<i>pr</i>	<i>R</i> <sup>2</sup>
1) MCQ-2	34.28***	1,433	.27	5.86***	.27	.07
2) MCQ-1	11.58***	1,432	.16	3.40***	.16	.10
3) MCQ-5	6.35*	1,431	-.12	-2.52*	-.12	.11
4) Problem-Focused Coping	33.93***	1,430	-.31	-5.83***	-.27	.18
5) Emotion-Focused Coping	6.85**	1,429	.12	2.62**	.13	.19

Note \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ; MCQ-1 = positive beliefs about worry, MCQ-2 = negative beliefs concerning uncontrollability of thoughts and danger, MCQ-5 = cognitive self-consciousness.

### 3.5.4.2 Associated Factors of Social Avoidance

The last regression analyses examined the associated factors of Social Avoidance. Among the metacognition categories, initially Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2) entered into the regression equation ( $\beta = .27$ ,  $t(433) = 5.89$ ,  $p < .001$ ,  $pr = .27$ ) and explained 8% of the variance by itself,  $F_{\text{change}}(1,433) = 34.73$ ,  $p < .001$ . As the second step, Positive Beliefs about Worry (MCQ-1), entered into the equation ( $\beta = .13$ ,  $t(432) = 2.81$ ,  $p < .01$ ,  $pr = .13$ ) and explained variance increased slightly to 9%,  $F_{\text{change}}(1,432) = 7.90$ ,  $p < .01$ . After controlling for these types of metacognition, which explained 9% of variance, among the coping styles, the lack of Problem-Focused Coping was significantly associated with the Social Avoidance ( $\beta = -.27$ ,  $t(431) = -5.59$ ,  $p < .001$ ,  $pr = -.26$ ) and the explained the variance increased to 15%,  $F_{\text{change}}(1,431) = 31.24$ ,  $p < .001$ . Finally, Emotion-Focused Coping entered into the equation ( $\beta =$

.14,  $t(430) = 3.17$ ,  $p < .01$ ,  $pr = .15$ ) and explained the variance increased slightly to 17% at this final step,  $F_{\text{change}}(1,430) = 10.06$ ,  $p < .01$ .

**Table 31. Associates of Social Avoidance**

	<i>F</i> change	df	$\beta$	<i>t</i> (within set)	<i>pr</i>	$R^2$
1) MCQ-2	34.73***	1,433	.27	5.89***	.27	.08
2) MCQ-1	7.90**	1,432	.13	2.81**	.13	.09
3) Problem-Focused Coping	31.24***	1,431	-.27	-5.59***	-.26	.15
4) Emotion-Focused Coping	10.06**	1,430	.14	3.17**	.15	.17

Note \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ; MCQ-1 = positive beliefs about worry, MCQ-2 = negative beliefs concerning uncontrollability of thoughts and danger.

### 3.6. Moderation Analysis

All possible interactions between different types of metacognition [i.e., Positive Beliefs about Worry (MCQ-1), Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2), Lack of Cognitive Confidence (MCQ-3), Beliefs about Need to Control Thoughts (MCQ-4) and Cognitive Self-Consciousness (MCQ-5)], with different sources of coping styles (i.e., Problem-Focused, Emotion-Focused, and Indirect Coping) were examined. Among those analyses, only 6 moderation analyses revealed significant outcome. Therefore, subsequently, in order to examine the moderator role of coping styles between metacognition measures and anxiety symptoms 6 separate regression analysis were carried out. For these analyses dependent variables were Depression, Absence of

Worry, Social Anxiety, and Social Avoidance, respectively. Prior to these regression analyses, independent variables (i.e., types of metacognition) and moderators (i.e., coping styles) and were centered; and high and low values of moderator terms were computed by using 1 SD unit. Regarding each dependent variable, 2 separate post-hoc regression analyses were carried out for high and low values of the moderator term. In these analyses, besides the relevant moderator term (high or low), the type of metacognition and the interaction terms were entered into the equation at the first step. After running the analyses, by using the unstandardized correlation coefficient, the equations were computed for high (+ 1 SD) and low (- 1 SD) metacognition values respectively, for both high and low moderator values separately. Then regression lines were plotted by using the obtained values.

### **3.6.1 Moderator Role of Problem-Focused Coping between MCQ-2 and Depression**

The first regression analysis examined the moderator role of Problem-Focused Coping between Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2) and depression. The results indicated significant main effects for MCQ-2 ( $\beta = .26, t(432) = 5.78, p < .001, pr = .27$ ) and Problem-Focused Coping ( $\beta = .32, t(432) = -6.90, p < .001, pr = -.32$ ) and a significant interaction effect between these two variables ( $\beta = -.16, t(431) = -3.75, p < .001, pr = -.18$ ) on depression. For this interaction term, two separate post-hoc regression analyses revealed that simple slope of depression on MCQ-2 was significant when Problem-Focused Coping was low ( $\beta = .39, t(431) = 6.94, p < .001$ ). The direction of the relationship indicated that depressive symptoms tended to be higher at higher levels

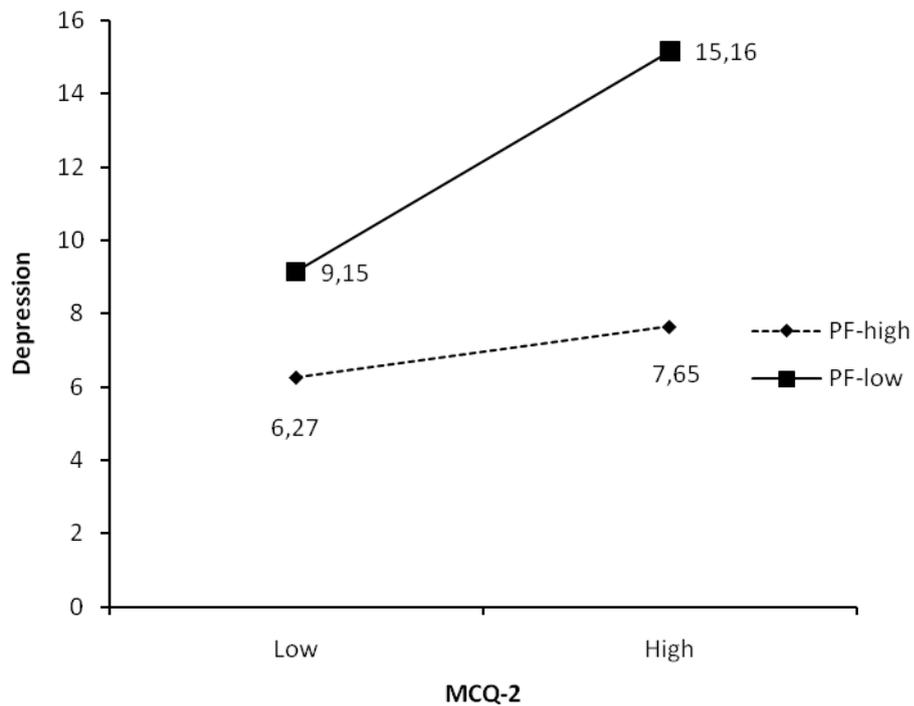
of MCQ-2 when the level of Problem-Focused Coping was low. However, simple slope of depression on MCQ-2 was not significantly different from zero at high levels of Problem-Focused Coping ( $\beta = .10, t(431) = 1.40, ns$ ).

By using these two post-hoc equations, regression equations were generated for high and low values of Problem-Focused Coping separately. By using the obtained 4 values, the simple regression slopes for the high and low values of MCQ-2 (i.e. 1 SD above and below the mean) were plotted (see Figure 14).

**Table 32. Moderation Analysis of Depression**

	<i>F</i> change	df	$\beta$	<i>t</i> (within set)	<i>pr</i>	$R^2$
1) Main Effects	65.65***	2,432	-	-	-	.23
MCQ-2	-	432	.26	5.78***	.27	-
PFC	-	432	.32	-6.90***	-.32	-
2) MCQ-2 $\times$ PFC	14.06***	1,431	-.16	-3.75***	-.18	.25

Note. \*\*\*  $p < .001$ , MCQ-2 = Negative Beliefs Concerning Uncontrollability of Thoughts and Danger, PFC = Problem Focused Coping



Note. PF = Problem Focused Coping, MCQ-2 = Negative Beliefs Concerning Uncontrollability of Thoughts and Danger.

**Figure 14. Interaction between Problem-Focused Coping and MCQ-2 in predicting Depression**

### 3.6.2 Moderator Role of Problem-Focused Coping between MCQ-1 and Absence of Worry

The second regression analysis examined the moderator role of Problem-Focused Coping between Positive Beliefs about Worry (MCQ-1) and Absence of Worry. The results indicated significant main effects for MCQ-3 ( $\beta = -.35, t(432) = -8.49, p < .05, pr = -.38$ ) and Problem-Focused Coping ( $\beta = .35, t(432) = 8.34, p < .05, pr = .37$ ) and a significant interaction effect between these two variables ( $\beta = -.14, t(431) = -3.43, p < .05, pr = -.16$ ) on Absence of Worry. For this interaction term, first post-hoc regression analysis revealed that simple slope of Absence of Worry on

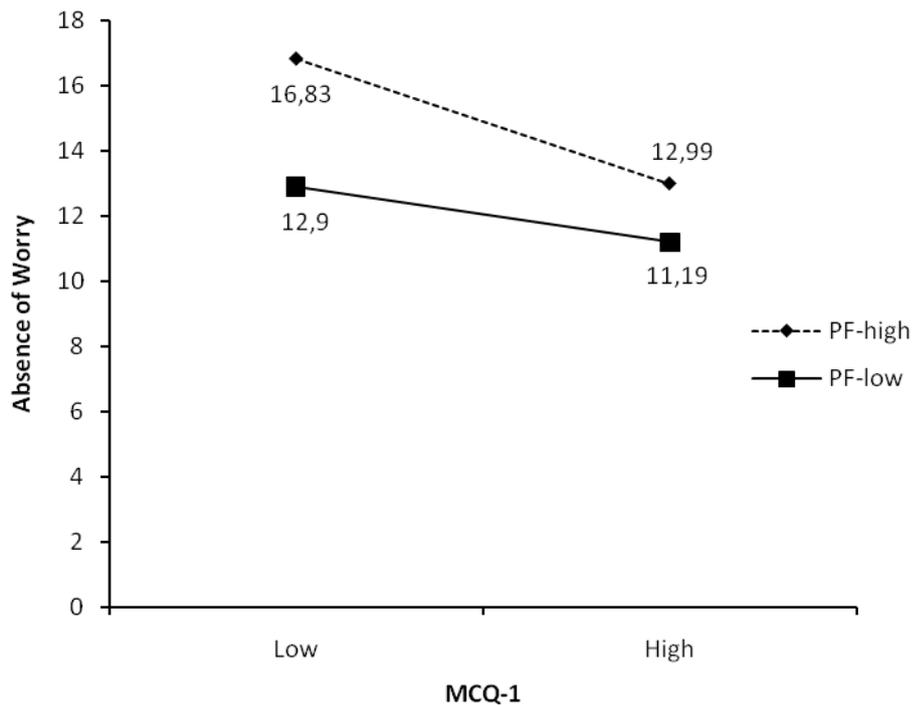
MCQ-1 was significant when Problem-Focused Coping was high ( $\beta = -.46, t(431) = -8.88, p < .001$ ). The direction of the relationship indicated that Absence of Worry tended to be higher at lower levels of MCQ-1 when the level of Problem-Focused Coping was high. Furthermore, the other simple slope of Absence of Worry on MCQ-1 was significant when Problem-Focused Coping was low ( $\beta = -.21, t(431) = -3.45, p < .001$ ). The direction of direction of the relationship again indicated that Absence of Worry tended to be higher at lower levels of MCQ-1 when the level of Problem-Focused Coping was high.

By using these two post-hoc equations, regression equations were generated for high and low values of Problem-Focused Coping separately. By using the obtained 4 values, the simple regression slopes for the high and low values of MCQ-1 (i.e. 1 SD above and below the mean) were plotted (see Figure 15).

**Table 33. Moderation Analysis of Absence of Worry**

	<i>F</i> change	df	$\beta$	<i>t</i> (within set)	<i>pr</i>	$R^2$
1) Main Effects	75.62***	2,432	-	-	-	.26
MCQ-1	-	432	-.35	-8.49*	-.38	-
PFC	-	432	.35	8.34*	.37	-
2) MCQ-1 $\times$ PFC	11.76***	1,431	-.14	-3.43*	-.16	.28

Note: \*\*\*  $p < .001$ , \*  $p < .05$ , MCQ-1 = Positive Beliefs about Worry, PFC = Problem Focused Coping



Note. PF = Problem Focused Coping, MCQ-1 = Positive Beliefs about Worry.

**Figure 15. Interaction between Problem-Focused Coping and MCQ-1 in predicting Absence of Worry.**

### 3.6.3 Moderator Role of Problem-Focused Coping between MCQ-5 and Social Anxiety

The third regression analysis examined the moderator role of Problem-Focused Coping between Cognitive Self-Consciousness (MCQ-5) and Social Anxiety. The results indicated significant main effects for MCQ-5 ( $\beta = .08, t(432) = 1.66, p < .05, pr = .08$ ) and Problem-Focused Coping ( $\beta = -.39, t(432) = -8.03, p < .001, pr = -.36$ ) and a significant interaction effect between these two variables ( $\beta = -.10, t(431) = -2.29, p < .05, pr = -.11$ ) on Social Anxiety. For this interaction term, two separate post-hoc regression analyses revealed that simple slope of Social

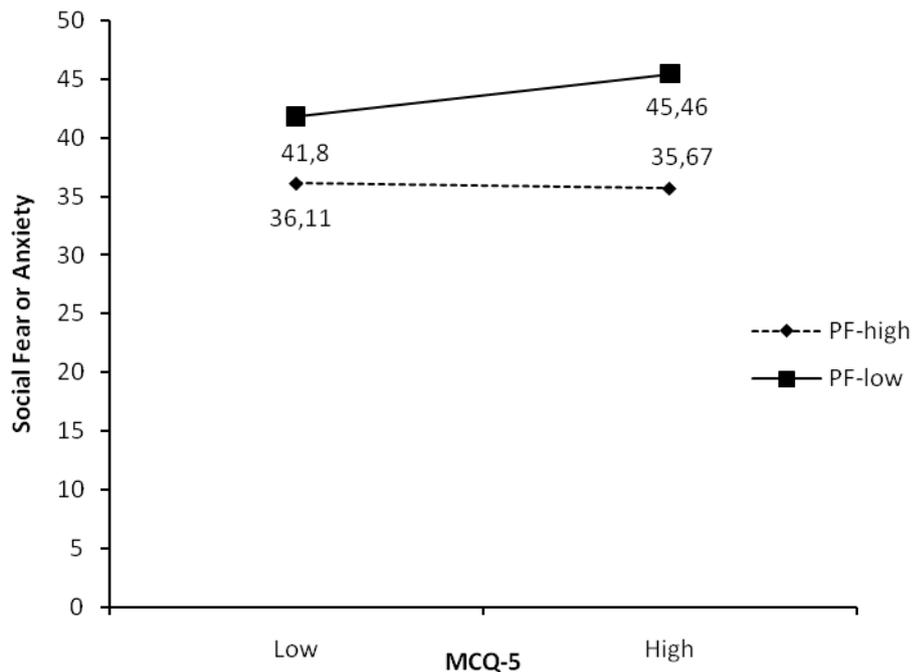
Anxiety on MCQ-5 was significant when Problem-Focused Coping was low ( $\beta = .18$ ,  $t(431) = 2.76$ ,  $p < .05$ ). The direction of the relationship indicated that the level of Social Anxiety tended to be higher at higher levels of MCQ-5 when the level of Problem-Focused Coping was low. However, simple slope of Social Anxiety on MCQ-5 was not significantly different from zero at high levels of Problem-Focused Coping ( $\beta = -.02$ ,  $t(431) = -0.33$ , ns).

By using these two post-hoc equations, regression equations were generated for high and low values of Problem-Focused Coping. By using the obtained 4 values, the simple regression slopes for the high and low values of MCQ- 5 (i.e. 1 SD above and below the mean) were plotted (see Figure 16).

**Table 34. Moderation Analysis of Social Anxiety**

	<i>F</i> change	df	$\beta$	<i>t</i> (within set)	<i>pr</i>	$R^2$
1) Main Effects	33.26***	2,432	-	-	-	.13
MCQ- 5	-	432	.08	1.66*	.08	-
PFC	-	432	-.39	-8.03***	-.36	-
2) MCQ-5 × PFC	5.25*	1,431	-.10	-2.29*	-.11	.28

Note: \*\*\*  $p < .001$ , \*  $p < .05$ ; MCQ-5 = Cognitive Self-Consciousness, PFC = Problem Focused Coping



Note. PF = Problem Focused Coping, MCQ-5 = Cognitive Self-Consciousness.

**Figure 16. Interaction between Problem-Focused Coping and MCQ-5 in predicting Social Fear or Anxiety.**

### **3.6.4 Moderator Role of Emotion-Focused Coping between MCQ-5 and Social Anxiety**

The fourth regression analysis examined the moderator role of Emotion-Focused Coping between Cognitive Self-Consciousness (MCQ-5) and Social Anxiety. The results indicated significant main effect only for Emotion-Focused Coping ( $\beta = .12, t(432) = 2.49, p < .05, pr = .12$ ) and a significant interaction effect between these two variables ( $\beta = -.18, t(431) = -3.77, p < .001, pr = -.18$ ) on Social Anxiety. For this interaction term, two separate post-hoc regression analyses revealed that simple slope of Social Anxiety on MCQ-5 was significant when

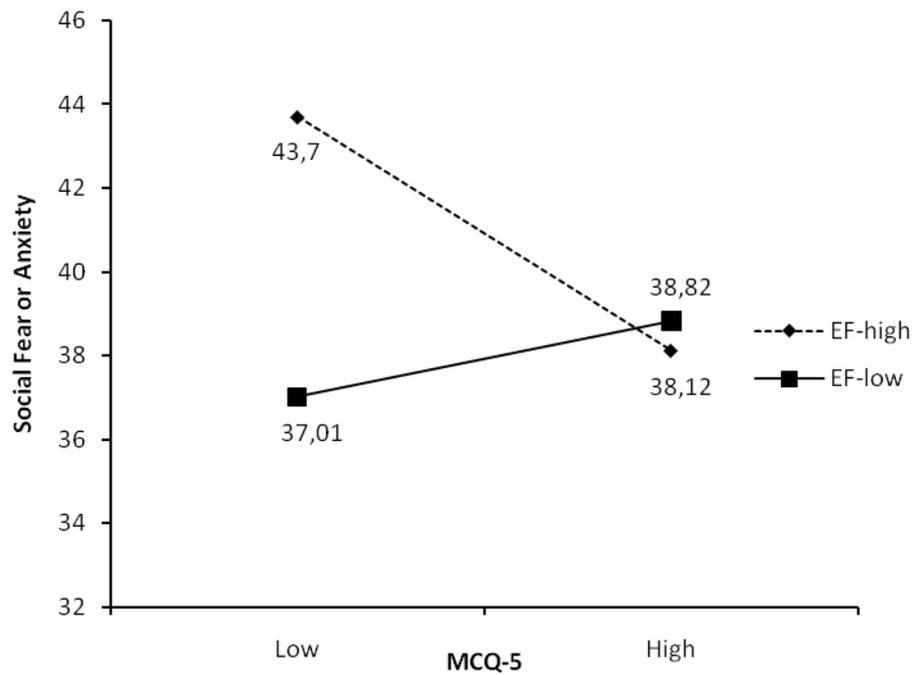
Emotion-Focused Coping was high ( $\beta = -.27, t(431) = -3.74, p < .001$ ). The direction of the relationship indicated that the level of Social Anxiety tended to be higher at lower levels of MCQ-5 when the level of Emotion-Focused Coping was high. However, simple slope of Social Anxiety on MCQ-5 was not significantly different from zero at low levels of Emotion-Focused Coping ( $\beta = .09, t(431) = 1.40, ns$ ).

By using these two post-hoc equations, regression equations were generated for high and low values of Emotion-Focused Coping. By using the obtained 4 values, the simple regression slopes for the high and low values of MCQ- 5 (i.e. 1 SD above and below the mean) were plotted (see Figure 17).

**Table 35. Moderation Analysis of Social Anxiety**

	<i>F</i> change	df	$\beta$	<i>t</i> (within set)	<i>pr</i>	$R^2$
1) Main Effects	3.95*	2,432	-	-	-	.02
MCQ- 5	-	432	-.06	-1.35	-.07	-
EFC	-	432	.12	2.49*	.12	-
2) MCQ-5 × EFC	14.19***	1,431	-.18	-3.77***	-.18	.05

Note: \*\*\*  $p < .001$ , \*  $p < .05$ ; MCQ-5 = Cognitive Self-Consciousness, EFC = Emotion-Focused Coping



Note. EF = Emotion-Focused Coping, MCQ-5 = Cognitive Self-Consciousness.

**Figure 17. Interaction between Emotion-Focused Coping and MCQ-5 in predicting Social Fear or Anxiety.**

### 3.6.5 Moderator Role of Indirect Coping between MCQ-1 and Social Anxiety

The fifth regression analysis examined the moderator role of Indirect Coping between Positive Beliefs about Worry (MCQ-1), and Social Anxiety. The results indicated significant main effect only for MCQ-1 ( $\beta = .22, t(432) = 4.56, p < .001, pr = .21$ ) and a significant interaction effect between these two variables ( $\beta = -.13, t(431) = -2.68, p < .05, pr = -.13$ ) on Social Anxiety. For interaction term, two separate post-hoc regression analyses revealed that simple slope of Social Anxiety on MCQ-1 was significant when Indirect Coping was low ( $\beta = .32, t(431) = 5.24, p < .001$ ). The direction of the relationship indicated that the level of Social Anxiety tended to be

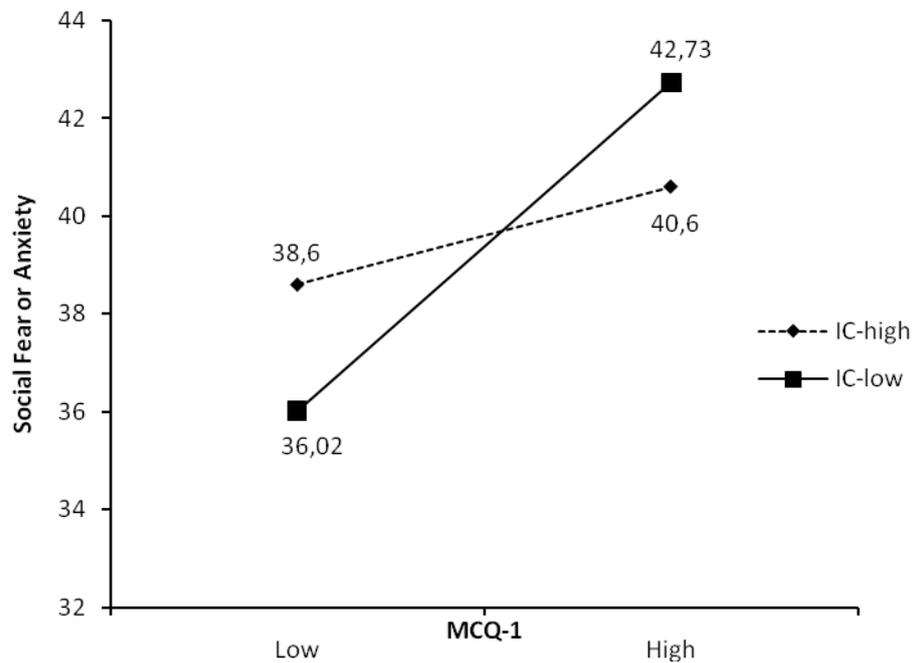
higher at higher levels of MCQ-1 when the level of Indirect Coping was low. However, simple slope of Social Anxiety on MCQ-1 was not significantly different from zero at high levels of Indirect Coping ( $\beta = .10, t(431) = 1.48, ns$ ).

By using these two post-hoc equations, regression equations were generated for high and low values of Indirect Coping. By using the obtained 4 values, the simple regression slopes for the high and low values of MCQ-1 (i.e. 1 SD above and below the mean) were plotted (see Figure 18).

**Table 36. Moderation Analysis of Social Anxiety**

	<i>F</i> change	df	$\beta$	<i>t</i> (within set)	<i>pr</i>	$R^2$
1) Main Effects	10.51***	2,432	-	-	-	.05
MCQ-1	-	432	.22	4.56***	.21	-
IC	-	432	.00	0.08	.00	-
2) MCQ-1 $\times$ IC	7.20**	1,431	-.13	-2.68*	-.13	.06

Note: \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$ ; MCQ-1 = Positive Beliefs about Worry, IC = Indirect Coping.



Note. IC= Indirect Coping, MCQ-1 = Positive Beliefs about Worry

**Figure 18. Interaction between Indirect Coping and MCQ-1 in predicting Social Fear or Anxiety.**

### **3.6.6 Moderator Role of Emotion-Focused Coping between MCQ-5 and Social Avoidance**

The last regression analysis examined the moderator role of Emotion-Focused Coping between Cognitive Self-Consciousness (MCQ-5) and Social Avoidance. The results indicated significant main effect only for Emotion-Focused Coping ( $\beta = .15$ ,  $t(432) = 3.04$ ,  $p < .05$ ,  $pr = .15$ ) and a significant interaction effect between these two variables ( $\beta = -.22$ ,  $t(431) = -4.60$ ,  $p < .001$ ,  $pr = -.22$ ) on Social Avoidance. For this interaction term, two separate post-hoc regression analyses revealed that simple slope

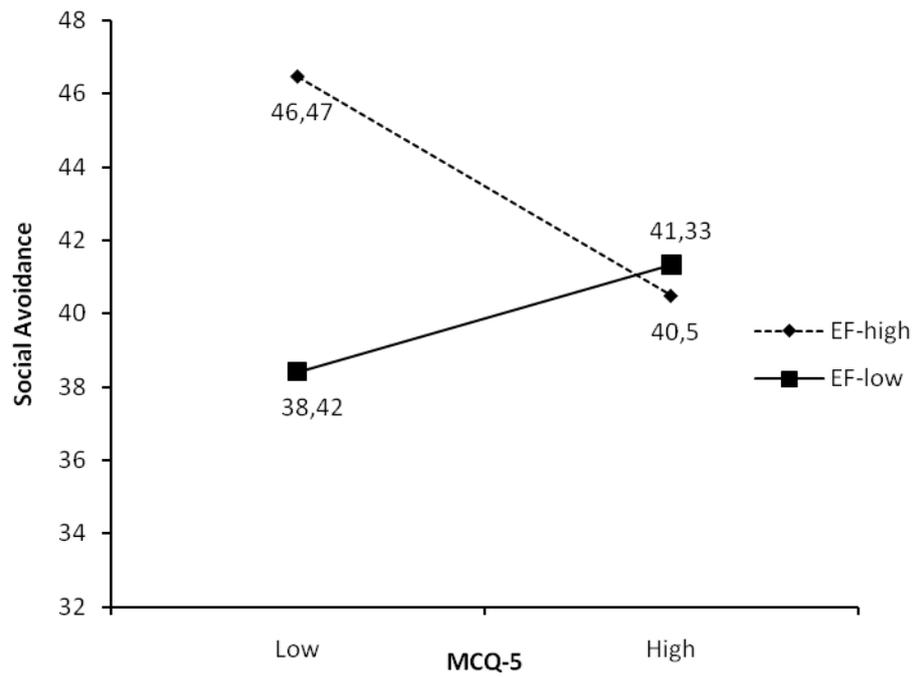
of Social Avoidance on MCQ-5 was significant when Emotion-Focused Coping was high ( $\beta = -.29, t(431) = -4.09, p < .001$ ). The direction of the relationship indicated that the level of Social Avoidance tended to be higher at lower levels of MCQ-5 when the level of Emotion-Focused Coping was high. Furthermore, the other simple slope of Social Avoidance on MCQ-5 was significant when Emotion-Focused Coping was low ( $\beta = .14, t(431) = 2.27, p < .05$ ). In contrast to first slope, the direction of this relationship indicated that the level of Social Avoidance tend to be low at lower levels of MCQ-5 when the level of Emotion-Focused Coping is low.

By using these two post-hoc equations, regression equations were generated for high and low values of Emotion-Focused Coping. By using the obtained 4 values, the simple regression slopes for the high and low values of MCQ- 5 (i.e. 1 SD above and below the mean) were plotted (see Figure 19).

**Table 37. Moderation Analysis of Social Avoidance**

	<i>F</i> change	df	$\beta$	<i>t</i> (within set)	<i>pr</i>	$R^2$
2) Main Effects	5.00**	2,432	-	-	-	.02
MCQ- 5	-	432	-.04	-0.92	-.04	-
EFC	-	432	.15	3.04*	.15	-
2) MCQ-5 × EFC	21.16***	1,431	-.22	-4.60***	-.22	.07

Note: \*\*\*  $p < .001$ , \*\* $p < .01$ , \*  $p < .05$ ; MCQ-5 = Cognitive Self-Consciousness, EFC = Emotion-Focused Coping



Note. EF = Emotion-Focused Coping, MCQ-5 = Cognitive Self-Consciousness.

**Figure 19. Interaction between Emotion-Focused Coping and MCQ-5 in predicting Social Avoidance.**

## **CHAPTER IV**

### **DISCUSSION**

The main aims of the present study were to investigate the associated factors of psychological well-being (i.e., anxiety, depression, state worry and social worry) and the moderator role of coping strategies (i.e., Problem-Focused Coping, Emotion-Focused Coping, and Indirect Coping) in the relationship between metacognitions [i.e., Positive Beliefs about Worry (MCQ-1), Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2), Lack of Cognitive Confidence (MCQ-3), Beliefs about Need to Control Thoughts (MCQ-4) and Cognitive Self-Consciousness (MCQ-5)] and psychological symptoms. In addition, possible effects of demographic variables on measures of the study and correlations among variables were examined as well.

#### **4.1 Review of the Hypotheses**

In the current study, as the first hypothesis, it was expected that certain types of metacognitions would be more significant for some psychological symptoms than others. This hypothesis was confirmed for all psychological symptoms. Specifically, Positive Beliefs about Worry (MCQ-1), Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2), Lack of Cognitive Confidence (MCQ-3), Beliefs about Need to Control Thoughts (MCQ-4) and Cognitive Self-

Consciousness (MCQ-5) were found to be positively correlated with depression. The findings for worry revealed significant relationship for Positive Beliefs about Worry (MCQ-1), Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2) and Beliefs about Need to Control Thoughts (MCQ-4). Considering the social anxiety and avoidance, Positive Beliefs about Worry (MCQ-1) and Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2) were found to be significant. In addition, Cognitive Self-Consciousness (MCQ-5) was found to be significantly correlated with social avoidance not social anxiety (details and discussion of the findings have been provided in subsections 4.4).

Secondly, it was hypothesized that different types of metacognition would be related with engaging different coping strategies. This hypothesis was confirmed, in the relation with different psychological symptoms including depression, absence of worry and social anxiety (details and discussion of the findings have been provided in subsections 4.5).

In terms of coping strategies, it was hypothesized that different coping strategies will be significant for some psychological symptoms rather than others. This assumption was also confirmed for all psychological symptoms; namely, trait anxiety, depression, worry and social anxiety. That is, trait anxiety, social anxiety and avoidance were found to be positively correlated with Emotion-Focused Coping and negatively correlated with Problem-Focused Coping. On the other hand, in terms of depression and worry, only Problem-Focused Coping emerged as significant (details and discussion of the findings have been provided in subsections 4.4).

Finally, in terms of moderation model, it was hypothesized that the associations between metacognitions and psychological symptoms would vary with

different kinds of adopted coping styles. This hypothesis was confirmed for model of depression, absence of worry, social anxiety and social avoidance (details and discussion of the findings have been provided in subsections 4.5).

In addition to that, it was also expected that demographic variables would have significant effects on measures in the study. This assumption was supported for worry, social anxiety and social avoidance, MCQ-2 (i.e., Negative Beliefs Concerning Uncontrollability of Thoughts and Danger, and MCQ-5 (i.e., Cognitive Self-Consciousness); Problem-Focused Coping and Indirect Coping (details and discussion of the findings have been provided in subsections 4.3).

#### **4.2. Psychometric Qualities of the Assessment Device**

In the current study, a range of measures were used to assess metacognitions, coping strategies and different domains of psychological well-being. These scales consist of Metacognitions Questionnaire, Ways of Coping Inventory, and Trait Anxiety form of State-Trait Anxiety Inventory, Beck Depression Inventory, Penn State Worry Questionnaire and Liebowitz Social Anxiety Scale. As expected, these scales established reasonably high internal consistency coefficients.

#### **4.3 Findings Related to Differences of Demographic Variables on Measures**

Influences of demographic variables including response styles, gender, employment status and father's education were examined on measures of the current study.

#### **4.3.1 Findings Related to Differences of Demographic Variables on Psychological Well-being**

It was expected that there would be significant effects of demographic variables (i.e., response styles, gender, employment status and father's education) on trait anxiety, depression, worry and social anxiety.

None of the demographic variables were found to be significant for either trait anxiety or depression. On the other hand, previous empirical studies established that parents' education level is an important factor affecting psychological well-being of their children (Kochanska, Aksan, Penney, & Boldt, 2007). In other words, children with highly educated parents are less likely to develop psychological problems compared to children having low educated parents. The low level of parents' education is considered as a risk factor associated with lower socioeconomic status (SES), poor parenting, more negative personality features (Kochanska, Aksan, Penney, & Boldt, 2007). However, in the current study, father's education level did not reveal significant difference with any kind of psychological symptoms. Therefore, further studies addressing the effects of additional parents' demographic characteristics such as parents' age, income level, and personality characteristics are needed to achieve comprehensive information in this relationship.

According to findings related to worry, gender was found to have significant effect. It was revealed that females had higher level of Presence of Worry than males. Similarly, males reported higher level of Absence of Worry than females. This finding is supported by previous a study which has found that although there is no significant difference in terms of contents of the worry, females reported greater level of worry than males (Robichaud, Dugas, & Conway, 2003). This

difference is explained by cognitive model of worry indicating that females are more likely to have negative problem orientations and they tend to engage in more thought suppression efforts than males. Furthermore, these two cognitive processes were found to be important in contribution of worry. Finally, it is emphasized that gender difference in worry is no longer significant after controlling these two process variables (Robichaud, Dugas, & Conway, 2003).

In terms of social anxiety, only employment status was found to be significant. Accordingly, students reported higher level of both social fear/anxiety and avoidance than employed people. Empirical studies also established the common impairments in individuals with high level of social phobia including unemployment, lower income, and lower education, poor mental health because of comorbid problems including substance abuse or depression (Acarturk, de Graaf, van Straten, ten Have, & Cuijpers, 2008). This finding may also be related with exposure which is considered as an important psychotherapy technique for social phobia. It is suggested that while safety behaviors or avoidance leads to persistence of social anxiety, facing the feared situations challenges cognitive misinterpretations and provides reattribution (Wells, 1997). From this perspective, it is reasonable to propose that employed individuals have more opportunity to be exposed to new social situations than students in dealing with social anxiety.

#### **4.3.2 Findings Related to Differences of Demographic Variables on Metacognitions**

It was expected that there would be significant effects of demographic variables (i.e., response styles, gender, employment status and father's education) on types of metacognitions; namely, Positive Beliefs about Worry (MCQ-1), Negative

Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2), Lack of Cognitive Confidence (MCQ-3), Beliefs about Need to Control Thoughts (MCQ-4) and Cognitive Self-Consciousness (MCQ-5). This assumption was confirmed for only gender.

Findings revealed a significant effect of gender on Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2) and on Cognitive Self-Consciousness (MCQ-5). Accordingly, females reported higher level of Negative Beliefs Concerning Uncontrollability of Thoughts and Danger than males. Wells (2002) indicated that MCQ-2 is strongly associated with development and persistency of generalized anxiety disorder (GAD) and it was also established that females were more likely to experience GAD (Wittchen, Zhao, Kessler, & Eaton, 1994). Furthermore, this finding is also supported by Zlomke and Hahn (2010) suggesting that females were more likely to engage in rumination than males.

On the other hand, findings also revealed that males indicated higher level of Cognitive Self-Consciousness than females.

### **4.3.3 Findings Related to Differences of Demographic Variables on Coping Strategies**

It was expected that there would be significant effects of demographic variables (i.e., response styles, gender, employment status and father's education) on different coping strategies (i.e., Problem-Focused Coping, Emotion-Focused Coping, and Indirect Coping). This hypothesis was supported for all coping styles.

The results revealed that males reported higher Problem-Focused Coping than females. On the other hand, females were more likely to be engaged in Indirect

Coping than males. Matud (2004) also established that females perceive life events as more negative and less controllable than males and tend to engage in more emotional and avoidance coping styles, whereas males use more rational and detachment coping strategies. In the result of these coping differences, women are more likely to have somatic symptoms and psychological problems. Gender difference in experiencing stress and engaging in coping strategies can be affected by contextual difference of stress experienced by woman and men. For instance, it was revealed that women reported high frequency of family and health related events as daily stressors, while males were more likely to be concerned about financial and work-related issues (Matud, 2004).

In addition, father's education was found to be significant for Emotion-Focused Coping. That is; participants having low educated father tended to engage in more Emotion-Focused Coping than having high educated father. As mentioned before, in literature, there is body of evidence indicating that lower level of parent's education is closely related with negative personality characteristics, poor parenting quality, lower socioeconomic status, and negative family environment (Kochanska, Aksan, Penney, & Boldt, 2007). Furthermore, it is well established that these parental characteristics and family environment have significant effects on child's socialization of coping. For instance, Kliwer, Fearnow & Miller (1996) indicated that children growing in more positive family environment and coherence, with high parental acceptance, and with parents using active coping are less likely to develop passive or avoidant coping styles.

#### **4.4 Findings Related to Associated Factors of Psychological Well-being**

In the present study, associated factors including metacognitions [i.e., Positive Beliefs about Worry (MCQ-1), Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2), Lack of Cognitive Confidence (MCQ-3), Beliefs about Need to Control Thoughts (MCQ-4) and Cognitive Self-Consciousness (MCQ-5)] and coping strategies (i.e., Problem-Focused Coping, Emotion-Focused Coping, and Indirect Coping), for various psychological symptoms were examined.

##### **4.4.1 Findings Related to Associated Factors of Trait Anxiety**

Among different types of metacognitions, Trait Anxiety was found to be positively correlated with Positive Beliefs about Worry (MCQ-1), Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2), and negatively correlated with Cognitive Self-Consciousness (MCQ-4).

Based on coping strategies, Trait Anxiety is negatively correlated with Problem-Focused Coping and positively correlated with Emotion-Focused Coping. Myers (1997) pointed out that individuals who are characterized as having low level trait anxiety and high level of defensiveness are termed as “repressors” and these individuals tend to engage in more avoidant coping style, especially distraction strategies, and fewer self-punishment strategies compared to highly anxious individuals. Therefore, although results in the present study is consistent with literature, further study would be valuable in order to investigate sub-domains of Emotion-Focused Coping strategies including distancing, self-blame, religious coping, that may have different effects in trait-anxiety level.

#### **4.4.2 Findings Related to Associated Factors of Depression**

The findings indicated that high level of Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2) and Beliefs about Need to Control Thoughts (MCQ-4) increased the probability of depression. This finding is consistent with metacognitive model of depression suggesting that, the activation of rumination related to negative thoughts and beliefs, and worry lead the person focus on negative events and feelings more intensely, so that depressive symptoms increase and depressed person begins to lose awareness of rumination and tend to worry about losing control over worrying itself.

Besides these metacognition categories, Wells (2009) also emphasized the Positive Beliefs about Worry (MCQ-1) in metacognitive model depression. According to this model, depressed individuals engage in worry as a coping strategy in dealing with depressive symptoms. It is suggested that these individuals believe that rumination of negative beliefs and emotions lead to help them understand and find solutions to negative feelings and thoughts. However, in the current study, MCQ-1 was not found to be significant for depression.

Among coping strategies, the use of Problem-Focused Coping decreased the risk of depression. Consistent with this finding, Coyne, Aldwin, and Lazarus (1981) described coping styles of depressed individuals as seeking emotional and informational support; and wishful thinking, but lack of rational, problem-oriented coping strategies.

#### **4.4.3 Findings Related to Associated Factors of Worry**

Findings related to Presence of Worry revealed that Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2), Positive Beliefs

about Worry (MCQ-1) and engaging in Indirect Coping were important in predicting worry. On the other hand, Beliefs about Need to Control Thoughts (MCQ-4) and Problem-Focused Coping were found to be significant in decreasing worry.

In terms of Absence of Worry, while Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2), Positive Beliefs about Worry (MCQ-1) was found to be significant in decreasing probability of absence of worry; Beliefs about Need to Control Thoughts (MCQ-4) and Cognitive Self-Consciousness (MCQ-5) and engaging in Problem-Focused Coping increased the probability of dealing with worry.

These findings are supported by various empirical studies. For instance, it was well established that both positive and negative beliefs about worry have important roles in proneness to pathological worry (Cartwright-Hatton & Wells, 1997; Wells & Papageorgiou, 1998). Furthermore, Type 2 worry referring to worry about worry (i.e., meta-worry) was found to be more significant than Type 1 worry in developing pathological worry (Wells & Carter, 1999).

Furthermore, as mentioned before, excessive and uncontrollable worry is a core component of generalized anxiety disorder (GAD) (DSM IV, 1994). Empirical findings investigating metacognitive model of GAD revealed that patients suffering from GAD have significantly higher score on Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2) than patients with social phobia, panic disorder or nonclinical individuals (Wells & Carter, 2000). It was also found that patients with GAD are more likely to have positive beliefs about worry including superstition or problem-solving than non-anxious individuals (Borkovec & Roemer, 1995).

Finally, findings related Problem-Focused Coping style leading to decrease Presence of Worry and increase Absence of Worry is also supported by previous empirical studies indicating that worry is negatively associated with not only problem-focused coping behaviors, but also perceived effectiveness of coping efforts (Hong, 2007). In other words, people with high level of worry tend to have less confidence about their solutions and engage in more maladaptive coping behaviors such as focusing on perceived threat in dealing with problems or negative outcomes of coping strategies and persistent dissatisfaction with coping strategies (Davey, 1993; Robichaud & Dugas, 2005 a, b).

#### **4.4.4 Findings Related to Associated Factors of Social Anxiety**

Findings revealed that social anxiety and avoidance was predicted by having Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2), Positive Beliefs about Worry (MCQ-1), and engaging in Emotion-Focused Coping strategies. However, using high Problem-Focused Strategies tended to decrease experiencing social anxiety and avoidance. These findings are consistent with both cognitive and metacognitive theories of social phobia. For instance, Positive Beliefs about Worry is consistent with negative expectancy of social phobic person suggested by Clark & Wells (1995). Since social phobic individuals have expectancy of humiliation and failure, positive beliefs about worry may have function to make them be prepared for these possible negative consequences. Furthermore, avoiding from social situations, anticipating safety behaviors to reduce the possible risk of embarrassment and negative self appraisals are also considered as major features of social phobia (Clark & Wells, 1995) and these features may be accepted as consistent with Emotion-Focused Coping.

In addition, Cognitive Self-Consciousness (MCQ-5) was also found to be significant in dealing with social anxiety but not social avoidance. Dannahy and Stopa (2007) established that two particular metacognitions, namely, Cognitive Self-Consciousness (MCQ-5) and Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2) were significantly reported by students with high social anxiety. Cognitive Self-Consciousness referring to monitor own cognitive processes and thoughts is consistent with the “observer perspective” of a social phobic person in which focusing on interoceptive information such as bodily sensations, feelings and observation of one’s own performance (Wells, 1997). However, in this study, it was revealed negative association between Cognitive Self-Consciousness (MCQ-5) and social anxiety. This inconsistency may be resulted from the nonclinical characteristics of participants who can effectively use this metacognition in dealing with social anxiety.

#### **4.5 Findings Related to Moderation Analyses**

The moderation analyses were carried out in order to examine the moderator role of coping strategies (i.e., Problem-Focused Coping, Emotion-Focused Coping, and Indirect Coping) between metacognitions [i.e., Positive Beliefs about Worry (MCQ-1), Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2), and Cognitive Self-Consciousness (MCQ-5)] and Depression, Absence of Worry, Social Anxiety, and Social Avoidance.

#### **4.5.1 Findings Related to Moderator Role of Problem-Focused Coping between MCQ-2 and Depression**

The regression analysis revealed that when people engage in less Problem-Focused Coping, depressive symptoms tended to be increased at higher levels Negative Beliefs Concerning Uncontrollability of Thoughts and Danger (MCQ-2). However, MCQ-2 level did not significantly affect experiencing depression when people have high Problem-Focused Coping strategies. Broderick & Korteland (2002) established that depressed adolescents have higher level of rumination, negative emotionality and lower use of distraction and less effective problem-solving. Morrow & Nolen-Hoeksema (1990) also suggested that rumination as a Emotion-Focused Coping leads to intensification and persistency of depression. The findings were consistent with previous studies by demonstrating that Problem-Focus Coping is an important protective factor and having high level of problem-focused strategies can buffer the negative impact of negative metacognition on depression level. On the other hand, when there was a lack of Problem-Focused Coping style, Negative Beliefs about Uncontrollability of Thoughts and Danger (MCQ-2) which is related with losing awareness of rumination and worrying about controlling, was found to be significant in increasing depression level.

#### **4.5.2 Moderator Role of Problem-Focused Coping between MCQ-1 and Absence of Worry**

The findings of regression analysis indicated that when people use high or low level of Problem-Focused Strategies, Absence of Worry tended to be higher at lower levels of Positive Beliefs about Worry (MCQ-1). In other words, whether

people engage in low Problem-Focused Coping or high Problem-Coping strategies, positive metacognitions about worry was found to be significant for experiencing worry. This finding was well supported by metacognitive studies indicating that people with high level of worry have a tendency to use worry as coping strategy believing that worry is beneficial in dealing with stress and to be prepared for future threat (Wells, 2005).

#### **4.5.3 Moderator Role of Problem-Focused Coping between MCQ-5 and Social Anxiety**

The findings revealed that when people have lower level of Problem-Focused Coping, Social Anxiety tended to be higher at higher levels of Cognitive Self-Consciousness (MCQ-5). However, MCQ-5 level did not have significant effect on experiencing social anxiety when people have high Problem-Focused Coping strategies. In other words, high level of Problem-Focused Coping strategies have protective factor for Social Anxiety and is able to shield the negative effect of Cognitive-Consciousness relating with experiencing social fear or anxiety. However, when there was a lack of Problem-Focused Coping, Cognitive Self-Consciousness referring to monitor own cognitive processing significantly affected social anxiety level. This finding was consistent with the cognitive models of social phobia emphasizing one of the major features described as monitoring not only own external appearance and behavior, but also own feeling and physiological symptoms (Rapee & Heimberg, 1997).

#### **4.5.4 Moderator Role of Emotion-Focused Coping between MCQ-5 and Social Anxiety**

The regression analysis pointed out that Social Anxiety tended to be higher at lower levels of Cognitive Self-Consciousness (MCQ-5) when people engage in high level of Emotion-Focused Coping. On the other hand, MCQ-5 level did not have significant effect on experiencing social anxiety when people have lower Emotion-Focused Coping strategies. This finding is inconsistent with previous empirical studies revealing that Cognitive Self-Consciousness (MCQ-5) is a significant predictor for social anxiety (Dannahy and Stopa, 2007). On the other hand, finding related with negative impact of Emotion-Focused Coping on social anxiety level is consistent with literature. Therefore, in order to test this moderation model, further study is needed with specific coping mechanisms in dealing with social anxiety. For instance, engaging high Emotion-Focused Coping strategies may lead to total avoidance of social interactions or situations, and Cognitive Self-Consciousness (MCQ-5) may be deactivated in the result of this intense avoidance.

#### **4.5.5 Moderator Role of Indirect Coping between MCQ-1 and Social Anxiety**

The findings of regression analysis revealed that Social Anxiety tended to be higher at higher levels of Positive Beliefs about Worry (MCQ-1) when people were less likely to use Indirect Coping. However, MCQ-1 level did not significantly affect Social Anxiety Level when people engage high level of Indirect Coping. In other words, when people do not have Indirect Coping strategies, greater Positive Beliefs about Worry (MCQ-1) increased the social anxiety level. However, high level of Indirect Coping is able to buffer negative effects of Positive Beliefs about Worry

(MCQ-1) on social anxiety level. Indirect Coping referring to seeking social support, and this finding is consistent with the literature emphasizing that socially anxious person engages in various safety behaviors in order to avoid potential negative evaluation or embarrassment (Clark & Wells, 1995).

#### **4.5.6 Moderator Role of Emotion-Focused Coping between MCQ-5 and Social Avoidance**

The regression analysis pointed out that Social Avoidance tended to be higher at lower levels of Cognitive Self-Consciousness (MCQ-5) when people engaged in high level of Emotion-Focused Coping. In contrast, when people have less Emotion-Focused strategies, Social Avoidance tended to be low at lower levels of Cognitive Self-Consciousness (MCQ-5). This may be related that, as mentioned before, Cognitive Self-Consciousness (MCQ-5) referring to monitoring own cognitive processes may be deactivated in order to both behaviorally and cognitively avoid social situations or social interactions, when people have excessive Emotion-Focused Coping styles which are positively related with increase in anxiety.

#### **4.6 Strengths and Limitations of the Study**

As mentioned before, Metacognitive Theory is one of the recently developed cognitive theories; therefore, empirical studies are still limited to achieve comprehensive framework. This study is especially important in testing Metacognitive Theory with Turkish Sample. Furthermore, the present study offers an investigation of the role of specific metacognitions on various psychological symptoms. Finally, there is very limited study that examines the relation between

metacognition and coping styles; therefore, this study is valuable in investigating the effects of specific metacognition on engaging in different coping strategies.

On the other hand, although there is large sample size in the present study (N = 435), the sample is limited from Ankara and Istanbul especially from the urban areas; and the education level of the participants is mostly undergraduate level or above the average. These factors can be considered as limitations in the representation of population in Turkey.

#### **4.7 Future Directions and Clinical Implications**

In the present study, metacognitions were found to be significant for different psychological symptoms such as anxiety, depression, worry and social anxiety. These findings are important in understanding personal vulnerability, etiology and development of psychological disorders. In addition, the moderation model of coping strategies on this relationship was tested. On the other hand, these findings are based on data taken from only nonclinical sample. Therefore, additional research that is conducted with clinical sample having such symptoms and to compare those findings with control group may extend knowledge about metacognitive mechanisms.

Furthermore, the findings of the current study have important implications both not only research literature but also clinical setting. First of all, clarifying the role of specific metacognition for particular psychological symptoms with the consideration of individual's different coping style is important to develop not only more comprehensive case conceptualizations but also more effective intervention techniques.

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## APPENDICES

### APPENDIX A

#### DEMOGRAPHIC VARIABLE FORM/ DEMOGRAFİK BİLGİ FORMU

Yaş : \_\_\_\_\_

Cinsiyet: Kadın ( ) Erkek ( )

Doğum Yeri:

Eğitim Durumu:

Mesleğiniz:

Şu anda bir işte çalışıyor musunuz? :

Nerede Kalıyorsunuz? a) Kendi evimde

b) Kirada

c) Yurtta

d) Özel yurttta

Kiminle yaşıyorsunuz? a) Ailemle

b) Arkadaşlarımla

c) Akrabalarımla

d) Yalnız

En uzun süre yaşadığınız şehir/ kasaba:

Ailenizin eğitim durumu:

Anne: a) Okur-yazar değil

b) Okur-yazar veya ilkökul terk

c) İlkokul mezunu

d) Ortaokul mezunu

e) Lise mezunu

f) Üniversite

g) Master/ doktora

Baba: a) Okur-yazar değil

b) Okur-yazar veya ilkökul terk

c) İlkokul mezunu

d) Ortaokul mezunu

e) Lise mezunu

f) Üniversite

g) Master/ doktora

Şimdi ya da geçmişte psikolojik/psikiyatrik yardım aldınız mı? :

Evet, ise, şikâyetiniz/koyulan tanı ne(idi)? :

Ne tür bir tedavi aldınız? :

## APPENDIX B

### TRAIT ANXIETY INVENTORY/ SÜREKLİ KAYGI ÖLÇEĞİ

Aşağıda kişilerin kendilerine ait duygularını anlatmada kullandıkları bir takım ifadeler verilmiştir. Her ifadeyi dikkatlice okuyun, sonra da **genel olarak** nasıl hissettiğinizi, ifadelerin sağ tarafındaki rakamlardan uygun olanını işaretlemek suretiyle belirtin. Doğru ya da yanlış cevap yoktur. Herhangi bir ifadenin üzerinde fazla zaman sarf etmeksizin, **genel olarak** nasıl hissettiğinizi gösteren cevabı işaretleyin.

	Hemen hiç bir zaman	Bazen	Çok zaman	Hemen her zaman
1. Genellikle keyfim yerindedir.	1	2	3	4
2. Genellikle çabuk yorulurum.	1	2	3	4
3. Genellikle kolay ağlarım.	1	2	3	4
4. Başkaları kadar mutlu olmak isterim.	1	2	3	4
5. Çabuk karar veremediğim için fırsatları kaçıırım.	1	2	3	4
6. Kendimi dinlenmiş hissedirim.	1	2	3	4
7. Genellikle sakin, kendime hakim ve soğukkanlıyım.	1	2	3	4
8. Güçlüklerin yenemeyeceğim kadar biriktiğini hissedirim.	1	2	3	4
9. Önemsiz şeyler hakkında endişelenirim.	1	2	3	4
10. Genellikle mutluyum.	1	2	3	4

11. Her şeyi ciddiye alır ve etkilenirim.	1	2	3	4
12. Genellikle kendime güvenim yoktur.	1	2	3	4
13. Genellikle kendimi emniyette hissederim.	1	2	3	4
14. Sıkıntılı ve güç durumlarla karşılaşmaktan kaçınırım.	1	2	3	4
15. Genellikle kendimi hüzünlü hissederim.	1	2	3	4
16. Genellikle hayatımdan memnunum.	1	2	3	4
17. Olur olmaz düşünceler beni rahatsız eder.	1	2	3	4
18. Hayal kırıklıklarını öylesine ciddiye alırım ki hiç unutmam.	1	2	3	4
19. Akli başında ve kararlı bir insanım.	1	2	3	4
20. Son zamanlarda kafama takılan konular beni tedirgin eder.	1	2	3	4

## APPENDIX C

### BECK DEPRESSION INVENTORY/ BECK DEPRESYON ÖLÇEĞİ

Aşağıda kişilerin ruh durumlarını ifade ederken kullandıkları bazı cümleler verilmiştir. Her madde, bir çeşit ruh durumunu anlatmaktadır. Her maddeye o ruh durumunun derecesini belirleyen 4 seçenek vardır. Lütfen bu seçenekleri dikkatle okuyunuz. Son iki hafta içindeki (şu an dâhil) kendi ruh durumunuzu göz önünde bulundurarak, size en uygun olan ifadeyi bulunuz. Daha sonra, o maddenin yanındaki harfi işaretleyiniz.

1. (a) Kendimi üzgün hissetmiyorum.  
(b) Kendimi üzgün hissediyorum.  
(c) Her zaman için üzgünüm ve kendimi bu duygudan kurtaramıyorum.  
(d) Öylesine üzgün ve mutsuzum ki dayanamıyorum.
2. (a) Gelecekte umutsuz değilim.  
(b) Geleceğe biraz umutsuz bakıyorum.  
(c) Gelecekte beklediğim hiçbir şey yok.  
(d) Benim için bir gelecek yok ve bu durum düzelmeyecek.
3. (a) Kendimi başarısız görmüyorum.  
(b) Çevremdeki birçok kişiden daha fazla başarısızlıklarım oldu sayılır.  
(c) Geriye dönüp baktığımda, çok fazla başarısızlığım olduğunu görüyorum.  
(d) Kendimi tümüyle başarısız bir insan olarak görüyorum.
4. (a) Her şeyden eskisi kadar zevk alabiliyorum.  
(b) Her şeyden eskisi kadar zevk alamıyorum.  
(c) Artık hiçbir şeyden gerçek bir zevk alamıyorum.  
(d) Bana zevk veren hiçbir şey yok. Her şey çok sıkıcı.
5. (a) Kendimi suçlu hissetmiyorum.  
(b) Arada bir kendimi suçlu hissettiğim oluyor.  
(c) Kendimi çoğunlukla suçlu hissediyorum.  
(d) Kendimi her an için suçlu hissediyorum.
6. (a) Cezalandırıldığımı düşünmüyorum.  
(b) Bazı şeyler için cezalandırılabilirim hissediyorum.  
(c) Cezalandırılmayı bekliyorum.  
(d) Cezalandırıldığımı hissediyorum.

7. (a) Kendimden hoşnutum.  
(b) Kendimden pek hoşnut değilim.  
(c) Kendimden hiç hoşlanmıyorum.  
(d) Kendimden nefret ediyorum.
8. (a) Kendimi diğer insanlardan daha kötü görmüyorum.  
(b) Kendimi zayıflıklarım ve hatalarım için eleştiriyorum.  
(c) Kendimi hatalarım için çoğu zaman suçluyorum.  
(d) Her kötü olayda kendimi suçluyorum.
9. (a) Kendimi öldürmek gibi düşüncelerim yok.  
(b) Bazen kendimi öldürmeyi düşünüyorum, fakat bunu yapamam.  
(c) Kendimi öldürebilmeyi isterdim.  
(d) Bir fırsatını bulsam kendimi öldürürdüm.
10. (a) Her zamankinden daha fazla ağladığımı sanmıyorum.  
(b) Eskisine göre şu sıralarda daha fazla ağlıyorum.  
(c) Şu sıralarda her an ağlıyorum.  
(d) Eskiden ağlayabilirdim, ama şu sıralarda istesem de ağlayamıyorum.
11. (a) Her zamankinden daha sinirli değilim.  
(b) Her zamankinden daha kolayca sinirleniyor ve kızıyorum.  
(c) Çoğu zaman sinirliyim.  
(d) Eskiden sinirlendiğim şeylere bile artık sinirlenemiyorum.
12. (a) Diğer insanlara karşı ilgimi kaybetmedim.  
(b) Eskisine göre insanlarla daha az ilgiliyim.  
(c) Diğer insanlara karşı ilgimin çoğunu kaybettim.  
(d) Diğer insanlara karşı hiç ilgim kalmadı.
13. (a) Kararlarımı eskisi kadar kolay ve rahat verebiliyorum.  
(b) Şu sıralarda kararlarımı vermeyi erteliyorum.  
(c) Kararlarımı vermekte oldukça güçlük çekiyorum.  
(d) Artık hiç karar veremiyorum.

14. (a) Dış görünüşümün eskisinden daha kötü olduğunu sanmıyorum.  
(b) Yaşlandığımı ve çekiciliğimi kaybettiğimi düşünüyorum ve üzülüyorum.  
(c) Dış görünüşümde artık değiştirilmesi mümkün olmayan olumsuz değişiklikler olduğunu hissediyorum.  
(d) Çok çirkin olduğumu düşünüyorum.
15. (a) Eskisi kadar iyi çalışabiliyorum.  
(b) Bir işe başlayabilmek için eskisine göre kendimi daha fazla zorlamam gerekiyor.  
(c) Hangi iş olursa olsun, yapabilmek için kendimi çok zorluyorum.  
(d) Hiçbir iş yapamıyorum.
16. (a) Eskisi kadar rahat uyuyabiliyorum.  
(b) Şu sıralarda eskisi kadar rahat uyuyamıyorum.  
(c) Eskisine göre 1 veya 2 saat erken uyanıyor ve tekrar uyumakta zorluk çekiyorum.  
(d) Eskisine göre çok erken uyanıyor ve tekrar uyuyamıyorum.
17. (a) Eskisine kıyasla daha çabuk yorulduğumu sanmıyorum.  
(b) Eskisinden daha çabuk yoruluyorum.  
(c) Şu sıralarda neredeyse her şey beni yoruyor.  
(d) Öyle yorgunum ki hiçbir şey yapamıyorum.
18. (a) İştahım eskisinden pek farklı değil.  
(b) İştahım eskisi kadar iyi değil.  
(c) Şu sıralarda iştahım epey kötü.  
(d) Artık hiç iştahım yok.
19. (a) Son zamanlarda pek fazla kilo kaybettiğimi sanmıyorum.  
(b) Son zamanlarda istemediğim halde üç kilodan fazla kaybettim.  
(c) Son zamanlarda istemediğim halde beş kilodan fazla kaybettim.  
(d) Son zamanlarda istemediğim halde yedi kilodan fazla kaybettim.  
- Daha az yemeye çalışarak kilo kaybetmeye çalışıyor musunuz? EVET ( )  
HAYIR ( )

20. (a) Saęlıęım beni pek endiřelendirmiyor.  
(b) Son zamanlarda aęrı, sızı, mide bozukluęu, kabızlık gibi sorunlarım var.  
(c) Aęrı, sızı gibi bu sıkıntılarım beni epey endiřelendirdięi iin bařka řeyleri dūřünmek zor geliyor.  
(d) Bu tūr sıkıntılar beni öylesine endiřelendiriyor ki, artık bařka hibir řey dūřünemiyorum.
21. (a) Son zamanlarda cinsel yařantımda dikkatimi eken bir řey yok.  
(b) Eskisine oranla cinsel konularda daha az ilgiliyim.  
(c) řu sıralarda cinsellikle pek ilgili deęilim.  
(d) Artık, cinsellikle hibir ilgim kalmadı

## APPENDIX D

### PENN STATE WORRY QUESTIONNAIRE/ PENN STATE ENDİŞE

#### ÖLÇEĞİ

Her bir ifadenin sizi ne ölçüde tanımladığını, aşağıda verilen ölçekten yararlanarak değerlendiriniz ve uygun olan numarayı ilgili maddenin yanındaki boşluğa yazınız.

- | 1                     | 2 | 3                     | 4 | 5                       |
|-----------------------|---|-----------------------|---|-------------------------|
| Beni hiç tanımlamıyor |   | Beni biraz tanımlıyor |   | Beni çok iyi tanımlıyor |
- 
- \_\_\_ 1. Her şeyi yapmaya yeterli zamanım yoksa bunun için endişelenmem.
- \_\_\_ 2. Endişelerim beni bunaltır.
- \_\_\_ 3. Yaşamakta olduğum şeyler hakkında endişelenme eğiliminde değilimdir.
- \_\_\_ 4. Birçok durum beni endişelendirir.
- \_\_\_ 5. Yaşamakta olduğum şeyler hakkında endişelenmemem gerektiğini biliyorum ama kendime engel olamıyorum.
- \_\_\_ 6. Baskı altında olduğumda çok endişelenirim.
- \_\_\_ 7. Her zaman bir şeyler hakkında endişeleniyorum.
- \_\_\_ 8. Endişe verici düşünceleri aklımdan kolaylıkla atarım.
- \_\_\_ 9. Bir işi bitirir bitirmez, yapmak zorunda olduğum tüm diğer şeyler hakkında endişelenmeye başlarım.
- \_\_\_ 10. Asla herhangi bir şey için endişelenmem.
- \_\_\_ 11. Bir konu ile ilgili olarak yapabileceğim daha fazla bir şey olmadığında, artık o konu hakkında endişelenmem.

- \_\_\_ 12. Tüm yaşamım boyunca endişeli biri olmuşumdur.
- \_\_\_ 13. Yaşamakta olduğum şeyler hakkında endişeleniyor olduğumu farkedirim.
- \_\_\_ 14. Bir kez endişelenmeye başladığımda, bunu durduramam.
- \_\_\_ 15. Sürekli olarak endişeliyimdir.
- \_\_\_ 16. Tamamen yapıp bitirene kadar tasarladığım işler hakkında endişelenirim.

## APPENDIX E

### LIEBOWITZ SOCIAL ANXIETY SCALE/ LIEBOWITZ SOSYAL KAYGI

#### ÖLÇEĞİ

Uyarılar: Tüm seçeneklere geçen haftayı düşünerek-bugün de dâhil olacak şekilde puan veriniz. Eğer durumlardan biri geçen hafta içerisinde oluşmadıysa, bu durumla karşılaştığınızda göstereceğiniz tepkiyi puanlayınız. Her bir durum için (yaşanmış olan ya da yaşanmış olduğu varsayılan) hem “korku ya da anksiyete”nin derecesini hem de “kaçınma” sıklığını puanlayınız.		
	<b>Korlu ya da anksiyete</b> 1=yok 2=hafif 3=orta 4=şiddetli	<b>Kaçınma</b> 1=asla (% 0) 2=ara sıra (% 1-33) 3=sıkça (% 34-67) 4=genellikle (% 68-100)
1. Topluluk içerisinde telefon etmek		
2. Küçük bir grupta beraber bir aktiviteye katılmak		
3. Toplulukta yemek yemek		
4. Toplulukta içecek içmek		
5. Yönetici konumundaki biri ile konuşmak		
6. Seyirci önünde rol yapmak, oynamak ya da konuşmak		
7. Bir partiye / davete gitmek		
8. Biri ya da birileri tarafından izlenirken çalışmak		
9. Biri ya da birileri tarafından izlenirken yazı yazmak		
10. Çok iyi tanımadığınız birine telefon etmek		
11. Çok iyi tanımadığınız biri ile yüz yüze konuşmak		
12. Yabancılarla tanışmak		
13. Genel bir tuvalette idrar yapmak		
14. Başkalarının oturuyor olduğu bir odaya girmek		
15. İlgi merkezi olmak		
16. Ön hazırlık olmadan bir toplumda konuşmak		
17. Beceri, bilgi ya da yetenek ile ilgili bir sınava girmek		

18. Çok iyi tanımadığınız birine karşı görüş bildirmek ya da onunla aynı fikirde olmadığınızı söylemek		
19. Çok iyi tanımadığınız birinin doğrudan gözlerinin içine bakmak		
20. Bir gruba sözlü rapor vermek		
21. Cinsel ya da romantik bir ilişki amacıyla biriyle yakınlaşmaya çalışmak		
22- Bir malı parası iade edilmek üzere geri götürmek		
23. Bir parti / davet vermek		
24. Israrcı bir satıcıyı reddetmek		

## APPENDIX F

### METACOGNITION QUESTIONNAIRE-30/ ÜST-BİLİŞLER ÖLÇEĞİ-30

Bu anket insanların kendi düşünceleri hakkında sahip oldukları inançları ile ilgilidir. Aşağıda, insanların ifade ettikleri bazı inançlar listelenmiştir. Lütfen her maddeyi okuyunuz ve bu ifadeye genellikle ne kadar katıldığınızı uygun numarayı daire içine alarak belirtiniz.

Lütfen tüm maddelere cevap veriniz, doğru ya da yanlış cevap yoktur.

	Katılmıyor um	Biraz katılıyorum	Oldukça katılıyorum	Tamamen katılıyorum
1. Endişelenmek gelecekte olabilecek sorunları engellememe yardımcı olur	1	2	3	4
2. Endişelerim benim için tehlikelidir	1	2	3	4
3. Düşüncelerim hakkında çok düşünürüm	1	2	3	4
4. Endişelenerek kendi kendimi hasta edebilirim	1	2	3	4
5. Bir sorun üzerinde düşündüğüm esnada, zihnimin nasıl çalıştığının farkında olurum	1	2	3	4
6. Endişe verici bir düşünceyi kontrol altına almazsam ve sonra bu düşüncem gerçekleşirse, bu benim hatam olur	1	2	3	4
7. Planlı kalabilmek için endişelenmem gerekir	1	2	3	4
8. Kelime ve isimlerle ilgili hafızama güvenim azdır	1	2	3	4
9. Durdurmak için ne kadar uğraşsam da, endişe verici düşüncelerim devam eder	1	2	3	4

	Katılmıy um	Biraz katılıyorum	Oldukça katılıyorum	Tamamen katılıyorum
10. Endişelenmek işleri zihnimde bir düzene koymama yardımcı olur	1	2	3	4
11. Endişe verici düşüncelerimi görmezden gelmek elimde değildir	1	2	3	4
12. Düşüncelerimi izler, takip altında tutarım	1	2	3	4
13. Düşüncelerimi her zaman kontrolüm altında tutabilmem gerekir	1	2	3	4
14. Hafızam beni zaman zaman yanıltabilir	1	2	3	4
15. Endişelerim beni deliye döndürebilir	1	2	3	4
16. Düşüncelerimin sürekli farkındayım	1	2	3	4
17. Hafızam zayıftır	1	2	3	4
18. Zihnimin nasıl çalıştığına çok dikkat ederim	1	2	3	4
19. Endişelenmek yaşadıklarımın başatmeme yardımcı olur	1	2	3	4
20. Düşüncelerimi kontrol altına alamamak bir zayıflık işaretidir	1	2	3	4
21. Endişelenmeye başladığımda, bunu durduramam	1	2	3	4

	Katılmı yorum	Biraz katılıyorum	Oldukça katılıyorum	Tamamen katılıyorum
22. Bazı düşünceleri kontrol altına almadığım için cezalandırılacağım	1	2	3	4
23. Endişelenmek sorunları çözmeme yardımcı olur	1	2	3	4
24. Yerlerle ilgili hafızama güvenim azdır	1	2	3	4
25. Bazı düşünceleri akıldan geçirmek kötüdür	1	2	3	4
26. Hafızama güvenmem	1	2	3	4
27. Düşüncelerimi kontrol altına alamazsam, iş göremez hale gelirim	1	2	3	4
28. İyi çalışmak için, endişelenmem gerekir	1	2	3	4
29. Olaylarla ilgili hafızama güvenim azdır	1	2	3	4
30. Düşüncelerimi sürekli incelerim	1	2	3	4

**APPENDIX G**  
**THE WAYS OF COPING INVENTORY / BAŞA ÇIKMA YOLLARI**  
**ENVANTERİ**

**AÇIKLAMA**

Bir genç olarak çeşitli sorunlarla karşılaşılıyor ve bu sorunlarla başa çıkabilmek için çeşitli duygu, düşünce ve davranışlardan yararlanıyor olabilirsiniz.

Sizden istenilen karşılaştığınız sorunlarla başa çıkabilmek için neler yaptığınızı göz önünde bulundurarak, aşağıdaki maddeleri cevap kağıdı üzerinde işaretlemenizdir. Lütfen her bir maddeyi dikkatle okuyunuz ve cevap formu üzerindeki aynı maddeye ait cevap şıklarından birini daire içine alarak cevabınızı belirtiniz. Başlamadan önce örnek maddeyi incelemeniz yararlı olacaktır.

**ÖRNEK:**

Madde 4. İyimser olmaya çalışırım.

	Hiç uygun değil	Pek uygun değil	3 uygun	oldukça uygun	çok uygun
Madde 4.	1.....	2.....	3.....	4.....	5.....

1. Aklımı kurcalayan şeylerden kurtulmak için değişik işlerle uğraşırım.....  
1.....2.....3.....4.....5
2. Bir sıkıntım olduğunu kimsenin bilmesini istemem .....  
1.....2.....3.....4.....5
3. Bir mucize olmasını beklerim.....  
1.....2.....3.....4.....5
4. İyimser olmaya çalışırım.....  
1.....2.....3.....4.....5
5. “ Bunu da atlatırsam sırtım yere gelmez ” diye düşünürüm.....  
1.....2.....3.....4.....5
6. Çevremdeki insanlardan problemi çözmede bana yardımcı olmalarını beklerim  
1.....2.....3.....4.....5
7. Bazı şeyleri büyütmemeye üzerinde durmamaya çalışırım.....  
1.....2.....3.....4.....5
8. Sakin kafayla düşünmeye ve öfkelenmemeye çalışırım.....  
1.....2.....3.....4.....5
9. Bu sıkıntılı dönem bir an önce geçsin isterim.....  
1.....2.....3.....4.....5
10. Olayın değerlendirmesini yaparak en iyi kararı vermeye çalışırım.....  
1.....2.....3.....4.....5

11. Konuyla ilgili olarak başkalarının ne düşündüğünü anlamaya çalışırım.....  
1.....2.....3.....4.....5
12. Problemin kendiliğinden hallolacağına inanırım.....  
1.....2.....3.....4.....5
13. Ne olursa olsun kendimde direnme ve mücadele etme gücü hissedirim.....  
1.....2.....3.....4.....5
14. Başkalarının rahatlamama yardımcı olmalarını beklerim.....  
1.....2.....3.....4.....5
15. Kendime karşı hoşgörülü olmaya çalışırım.....  
1.....2.....3.....4.....5
16. Olanları unutmaya çalışırım.....  
1.....2.....3.....4.....5
17. Telaşımı belli etmemeye ve sakin olmaya çalışırım.....  
1.....2.....3.....4.....5
18. “Başa gelen çekilir” diye düşünürüm.....  
1.....2.....3.....4.....5
19. Problemin ciddiyetini anlamaya çalışırım.....  
1.....2.....3.....4.....5
20. Kendimi kapana sıkışmış gibi hissedirim.....  
1.....2.....3.....4.....5
21. Duygularımı paylaştığım kişilerin bana hak vermesini isterim.....  
1.....2.....3.....4.....5
22. Hayatta neyin önemli olduğunu keşfederim.....  
1.....2.....3.....4.....5
23. “Her işte bir hayır vardır” diye düşünürüm.....  
1.....2.....3.....4.....5
24. Sıkıntılı olduğumda her zamankinden fazla uyurum.....  
1.....2.....3.....4.....5
25. İçinde bulunduğum kötü durumu kimsenin bilmesini istemem.....  
1.....2.....3.....4.....5
26. Dua ederek Allah’tan yardım dilerim.....  
1.....2.....3.....4.....5
27. Olayı yavaşlatmaya ve böylece kararı ertelemeye çalışırım.....  
1.....2.....3.....4.....5
28. Olanla yetinmeye çalışırım.....  
1.....2.....3.....4.....5
29. Olanları kafama takıp sürekli düşünmekten kendimi alamam.....  
1.....2.....3.....4.....5
30. İçimde tutmaktansa paylaşmayı tercih ederim.....  
1.....2.....3.....4.....5
31. Mutlaka bir yol bulabileceğime inanır, bu yolda uğraşırım.....  
1.....2.....3.....4.....5
32. Sanki bu bir sorun değilmiş gibi davranırım.....  
1.....2.....3.....4.....5

33. Olanlardan kimseye söz etmemeyi tercih ederim.....  
1.....2.....3.....4.....5
34. “ İş olacağına varır ” diye düşünürüm.....  
1.....2.....3.....4.....5
35. Neler olabileceğini düşünüp ona göre davranmaya çalışırım.....  
1.....2.....3.....4.....5
36. İşin içinden çıkamayınca “ elimden bir şey gelmiyor ” der,  
durumu olduğu gibi kabullenirim.....  
1.....2.....3.....4.....5
37. İlk anda aklıma gelen kararı uygularım.....  
1.....2.....3.....4.....5
38. Ne yapacağıma karar vermeden önce arkadaşlarımla fikrini alırım.....  
1.....2.....3.....4.....5
39. Herşeye yeniden başlayacak gücü bulurum.....  
1.....2.....3.....4.....5
40. Problemin çözümü için adak adarım.....  
1.....2.....3.....4.....5
41. Olaylardan olumlu birşey çıkarmaya çalışırım.....  
1.....2.....3.....4.....5
42. Kırgınlığımı belirtirsem kendimi rahatlamış hissederim.....  
1.....2.....3.....4.....5
43. Alın yazısına ve bunun değişmeyeceğine inanırım.....  
1.....2.....3.....4.....5
44. Soruna birkaç farklı çözüm yolu ararım.....  
1.....2.....3.....4.....5
45. Başıma gelenlerin herkesin başına gelebilecek şeyler olduğuna inanırım.....  
1.....2.....3.....4.....5
46. “ Olanları keşke değiştirebilseydim ” derim.....  
1.....2.....3.....4.....5
47. Aile büyüklerine danışmayı tercih ederim.....  
1.....2.....3.....4.....5
48. Yaşamla ilgili yeni bir inanç geliştirmeye çalışırım.....  
1.....2.....3.....4.....5
49. “ Herşeye rağmen elde ettiğim bir kazanç vardır ” diye düşünürüm.....  
1.....2.....3.....4.....5
50. Gururumu koruyup güçlü görünmeye çalışırım.....  
1.....2.....3.....4.....5
51. Bu işin kefareti ( bedelini ) ödemeye çalışırım.....  
1.....2.....3.....4.....5
52. Problemi adım adım çözmeye çalışırım.....  
1.....2.....3.....4.....5
53. Elimden hiç birşeyin gelmeyeceğine inanırım.....  
1.....2.....3.....4.....5

54. Problemin çözümü için bir uzmana danışmanın en iyi yol olacağına inanırım  
1.....2.....3.....4.....5
55. Problemin çözümü için hocaya okunurum.....  
1.....2.....3.....4.....5
56. Herşeyin istediğim gibi olmayacağına inanırım.....  
1.....2.....3.....4.....5
57. Bu dertten kurtulayım diye fakir fukaraya sadaka veririm.....  
1.....2.....3.....4.....5
58. Ne yapılacağını planlayıp ona göre davranırım.....  
1.....2.....3.....4.....5
59. Mücadeleden vazgeçerim.....  
1.....2.....3.....4.....5
60. Sorunun benden kaynaklandığını düşünürüm.....  
1.....2.....3.....4.....5
61. Olaylar karşısında “ kaderim buymuş ” derim.....  
1.....2.....3.....4.....5
62. Sorunun gerçek nedenini anlayabilmek için başkalarına danışırım.....  
1.....2.....3.....4.....5
63. “ Keşke daha güçlü bir insan olsaydım ” diye düşünürüm.....  
1.....2.....3.....4.....5
64. Nazarlık takarak, muska taşıyarak benzer olayların olmaması  
için önlemler alırım.....  
1.....2.....3.....4.....5
65. Ne olup bittiğini anlayabilmek için sorunu enine boyuna düşünürüm.....  
1.....2.....3.....4.....5
66. “ Benim suçum ne ” diye düşünürüm.....  
1.....2.....3.....4.....5
67. “ Allah’ın takdiri buymuş ” diye kendimi teselli ederim.....  
1.....2.....3.....4.....5
68. Temkinli olmaya ve yanlış yapmamaya çalışırım.....  
1.....2.....3.....4.....5
69. Bana destek olabilecek kişilerin varlığını bilmek beni rahatlatır.....  
1.....2.....3.....4.....5
70. Çözüm için kendim birşeyler yapmak istemem.....  
1.....2.....3.....4.....5
71. “ Hep benim yüzümden oldu ” diye düşünürüm.....  
1.....2.....3.....4.....5
72. Mutlu olmak için başka yollar ararım.....  
1.....2.....3.....4.....5
73. Hakkımı savunabileceğime inanırım.....  
1.....2.....3.....4.....5
74. Bir kişi olarak iyi yönde değiştiğimi ve olgunlaştığımı hissederim.....  
1.....2.....3.....4.....5